```
1
          BEFORE THE BOARD OF OIL, GAS AND MINING
              DEPARTMENT OF NATURAL RESOURCES
 3
                IN AND FOR THE STATE OF UTAH
 4
                        ---00000---
 5
    IN THE MATTER OF THE
    REQUEST FOR AGENCY
    ACTION OF MAR/REG OIL
 6
    COMPANY FOR AN ORDER
 7
    ESTABLISHING 160-ACRE
    DRILLING AND SPACING UNITS
 8
    FOR HORIZONTAL WELLS IN
    AND THE PRODUCTION OF OIL,
 9
    GAS, AND OTHER HYDROCARBONS )
    FROM THE DESERT CREEK AND
10
    UPPER ISMAY FORMATIONS IN
    THE NE1/4 OF SECTION 19,
    TOWNSHIP 38 SOUTH, RANGE 26 )
11
    EAST, S.L.M., SAN JUAN
12
    COUNTY, UTAH.
                                )
13
          DOCKET NO. 2010-024, CAUSE NO. 188-04
14
    TAKEN AT:
                          Uintah Basin Applied Technology
15
                            College
                          Multipurpose Room
16
                          1100 East Lagoon Street
                          Roosevelt, Utah
17
                          September 22, 2010
    DATE:
18
                          9:44 a.m. to 11:13 a.m.
    TIME:
19
   REPORTED BY: Emily A. Gibb, RPR, CSR
20
21
    ATKINSON-BAKER, INC.
    COURT REPORTERS
22
    WWW.DEPO.COM
     (800) 288-3376
23
24 FILE NO. A403307
25
```

A403307 SEPTEMBER 22, 2010

	_	
1 APPEARANCES	1	MR. CLAWSON: Okay. Thank you very much.
2 CHAIRMAN:	2	Today we're here asking the board's approval for
Douglas E. Johnson	3	160-acre drilling unit actually drilling units for
4 BOARD MEMBERS:	4	two formations located in the Squaw Canyon Field in
Ruland J. Gill, Jr. (Excused)	5	San Juan County, Utah. Those formations are the
Jake Y. Harouny	6	
James T. Jensen 6 Kelly Payne (Excused)		upper Ismay and the Desert Creek formations, and
Samuel C. Quigley	7	we're seeking 160-acre spacing for two lateral
7 Jean Semborski	8	horizontal wells, drilled one each one into each
8	9	one of those stratigraphic intervals.
DIVISION OF OIL, GAS AND MINING: 9 John R. Baza, Director	10	This the the subject lands is the
Dana Dean, Associate Director, Mining (Excused)	11	northeast quarter of Section 19 in Township 38 South,
0 Jim Springer, Public Information Officer	12	Range 26 East. These lands previously have been
Steve Schneider, Administrative Policy Coordinator	13	spaced by the board back in 1980, and Cause No.
Julie Ann Carter, Secretary to the Board	14	188-1, the board approved 80-acre spacing for the
ASSISTANT ATTORNEYS GENERAL:	15	Desert Creek formation, essentially stand-up units,
Fred Donaldson - Division Attorney	16	drilling units, which means it was the east half and
Michael S. Johnson - Board Attorney 4	17	the west half. And that order also included other
5	18	
6	19	lands besides subject Section 19.
7	- 1	In Cause No. 188-1C, the board, after quite
8 9	20	a bit of extensive drilling, the board vacated that
0	21	order with respect to some lands, but not including
21	22	Section 19.
2	23	And in Cause No. 188-3, the board approved
4	24	an exception well location for the Three Amigos well,
	25	which is located in the northwest quarter of
Page 2	2	Page
Docket No. 2010-024 Cause No. 188-04	1	Section 19.
Wednesday, September 22, 2010	2	And in 1988, the board I mean, I'm sorry,
3 (The proceedings began at 9:44 a.m.)	3	the 1989, Cause No. 188-3A. The board vacated the
4	4	previous spacing orders for the Desert Creek
5	5	formation, which in up shot means that the subject
6 CHAIRMAN JOHNSON: Okay. The third matter	6	lands, which is the northeast quarter, are not
7 we have then this morning is Docket No. 2010-024,	7	subject to any spacing order by the board, and they
8 Cause No. 188-04, in the Matter of the Request for	8	were made subject to the board's general location
9 Agency Action of MAR/REG Oil Company for an Order	9	rules. So the board has spaced this, but it's also
Establishing 160-Acre Drilling and Spacing Units for	Γ.	vacated the order that's spaced it previously.
Horizontal Wells in and the Production of Oil and	11	Nevertheless, it is still subject to the
Oil, Gas, and other Hydrocarbons from the Desert	12	board's temporary spacing rule, creating a 640-acre
3 Creek and Upper Ismay Formations in the North East	13	drilling unit for a horizontal well. And that's its
corner of Section 19, Township 38 South, Range 26	14	current status right now. We're here today seeking
5 East, Salt Lake Meridian, San Juan County, Utah.	15	the board's approval of 160-acre spacing for a
6 Mr. Clawson, you're representing MAR/REG?	16	horizontal well because, as the evidence will show,
7 MR. CLAWSON: Thank you, Mr. Chairman.	17	the formation and and the reservoir properties
8 Yes, Tom Clawson on behalf of MAR/REG Oil	18	don't support spacing the entire 640 acres in this
9 Company.	19	section for purposes of producing the upper Ismay and
CHAIRMAN JOHNSON: Thank you.	20	the Desert Creek formations.
1 Mr. Donaldson, are you representing the	21	I need to make clear from the beginning
2 Division?	22	that that we're only dealing with the northeast
	23	
•		quarter here today. Our request for agency action
4 CHAIRMAN JOHNSON: Thank you.	24	that was filed in this matter does contain a request
5 Mr. Clawson, please go ahead.	25	to create temporary spacing for horizontal wells in

		_	
1	the remaining quarter sections of Section 19.	1	MR. JENSEN: Okay. Thank you.
2	Because if the board approves our request to create	2	CHAIRMAN JOHNSON: Thank you.
3	160-acre drilling in the northeast quarter, that, in	3	MR. CLAWSON: So with that, I'd like to
4	a sense, will viscerate the rule and no other party	4	introduce my witnesses with me today. To my left is
5	will be able to drill a horizontal well in	5	Tariq or Tariq Ahmad, who is MAR/REG's petroleum
6	Section 19.	6	engineer, who will testify as to the land and
7	I'm thinking that it would be good to give	7	ownership issues, as well as to reserve calculations
8	the Division a method to administratively approve	8	and and reservoir economics.
9	future horizontal wells in Section 19. We thought it	9	And then on my right is Mobashir Ahmad, who
10	might be prudent that the board create a temporary	10	is consulting petroleum geologist working for MAR/REG
11	rule governing those other sections, or other quarter	11	who will testify as to the geologic aspects of the
12	sections. But the Division's indicated that it	12	stratigraphic intervals that have been proposed for
13	doesn't support that temporary spacing, which	13	spacing today.
14	basically renders the issue moot. And and we	14	And with that, I'd ask that the witnesses be
15	don't wish to pursue that.	15	sworn in.
16	We don't have any ownership interest set	16	CHAIRMAN JOHNSON: (Speaking to court
17	aside in the northeast quarter, so I'm essentially	17	reporter.) Will you do that, please?
18	withdrawing that section of our request. The board	18	COURT REPORTER: Yes.
19	can, on its own, with its own authority if it decides	19	COOK REPORTER 163.
20	to, create a temporary spacing for the that would	20	Thereupon
21	be the northwest, the southwest, and the southeast	21	TARIQ AHMAD and MOBASHIR AHMAD,
22	quarter sections in Section 19. But but that's	22	were called as witnesses, and having been first duly
23	not something we're going to put evidence on today.	23	sworn to tell the truth, the whole truth, and nothing
24	So just so we're clear about that.	24	but the truth, testified as follows:
25	And but we are going to put on evidence	25	///
23			
	Page	6	Page 8
1	regarding the northeast quarter which are the subject	1	MR. CLAWSON: Okay. I'll call my first
2	lands, and where MAR/REG and the sister company,	2	witness, Tariq Ahmad.
3	Nathan Oil Nathan Oil, LTD, owns interest.	3	Would you please state your name and address
4	MR. JENSEN: It seems to me, Mr. Chairman,	4	for the record?
5	that it would be appropriate to have Mr. Clawson	5	TARIQ AHMAD: It's Tariq Ahmad, 13495 South
6	prepare a formal withdrawal. And I don't know quite	6	Hills Drive, Reno, Nevada 89511.
7	what the form is, Mr. Clawson, but but withdrawing	7	MR. CLAWSON: And what is your affiliation
8	those other sections from your request for agency	8	with MAR/REG?
9	action so that the record will be clear, and if you	9	TARIQ AHMAD: I am a petroleum engineer for
10	will submit it to the chairman.	10	MAR/REG Oil Company.
11	MR. CLAWSON: That would be fine. Or	11	MR. CLAWSON: And what are your and what
12	assuming the board approves today's request, I could	12	are your principal responsibilities in that position?
13	include it in that as well. It could be a finding	13	TARIQ AHMAD: With MAR/REG, I do all the
14	and part of the	14	petroleum engineering and as well as the land and
15	MR. MURRAY: I think either way, but I think	15	land and assignments and things of that sort.
16	we ought to have it in the record, because right now	16	MR. CLAWSON: Is MAR/REG a Nevada
17	you're you're on record formally asking for an	17	corporation?
18	adjudication on on quarter sections that you don't	18	TARIQ AHMAD: Yes, it is.
19	have any interest in.	19	MR. CLAWSON: Is it in good standing?
20	MR. CLAWSON: Right. And and we don't	20	TARIQ AHMAD: Yes.
21	have any interest in pursuing since the Division	21	MR. CLAWSON: Where is its principal place
22	MR. JENSEN: Right.	22	of business?
23	MR. CLAWSON: doesn't want it either.	23	TARIQ AHMAD: Reno, Nevada.
24	That would be fine. That would be a good	24	MR. CLAWSON: And is it qualified to conduct
25	way to do it.	25	business in Utah?
Γ	•		
l	Page	/	Page 9

1 TARIO AHMAD: Yes, it is. 1 another hole and the same cement squeeze job failed, 2 MR. CLAWSON: Okay. I draw your attention 2 so they had the same problem. 3 3 to Exhibit No. 1. When we took over the field, we put a packer 4 Are you -- have you examined this exhibit 4 in the hole to test the lower zones, but I don't 5 and are you familiar with it? 5 think that worked out too well. So now we are 6 TARIQ AHMAD: I have. 6 pulling -- we pulled everything out. We're going to 7 7 MR. CLAWSON: Could you please point out do another cement squeeze in that well and try to put 8 8 where the Squaw Canyon Field is? it back online. It's not that the reservoir has 9 TARIO AHMAD: It's on this map. It's 9 problems, it's the holes in the casing uphold. 10 L 0 labeled as Squaw Canyon, and it's around -- in the The 3-19 is producing also from the Desert 11 blank -- right around the Blanding area, right there 11 Creek and Ismay formation. And it's -- it's 12 12 to the southeast (indicating). basically now doing about 5 to 6 barrels a day with 13 13 MR. CLAWSON: Now, I call your attention to hardly any water production. 14 14 Exhibit No. 2. What we did was after we had studied this 15 15 (Exhibit 2 was discussed.) field. We also operate a field next door to this. 16 MR. CLAWSON: Have you examined this exhibit 16 It is called the Tin Cup field, which was discovered 17 and are you familiar with it? 17 by Marathon Oil Company. And in between, back in 18 18 TARIO AHMAD: Yes, I have. 2000, I think 2005-2005, Department of Energy had 19 19 MR. CLAWSON: What is this exhibit and what given a grant to Utah Geological Survey to do a study 20 20 does it tell us? on algal mound fields in this area. And that study 21 21 TARIQ AHMAD: This exhibit, I got this from basically stated that there is a lot of fields in 22 22 the report done by the Utah Geological Survey. And this area which will be abandoned unless something is 23 23 this report -- this map shows location of all of the done. And they recommended drilling horizontal 24 24 oil and gas fields in the southeast area of Utah, but wells, to -- to get additional oil from -- from the 25 25 what it also shows, if you look at it closely, it same fields. Page 12 Page 10 shows the trains of all the fields are going 1 Most of the fields are just one well to ten 1 2 2 northwest, southeast, and that's the general area well fields, averaging between 700,000 and 2.5 3 that we are interested in. 3 million barrels in recoverable. And so based on the 4 4 MR. CLAWSON: Could you please provide us Utah Geological Survey report and the Department of 5 with a brief history of the Squaw County Field and 5 Energy, we studied the fields and came to the same 6 6 this development? conclusion that in order to increase the ultimate 7 TARIQ AHMAD: Yeah, Squaw Canyon Field was 7 recovery, you must drill horizontal wells. 8 8 discovered in 1979 by using seismic, by MC Oil MR. CLAWSON: Is the Snow -- or I mean, I'm 9 9 Company, McCulloch Oil Corporation. The first well sorry, the Squaw Canyon field an algal mound feature? 10 10 drilled there was the Federal 1-19. It was tested in TARIQ AHMAD: Yes. 11 11 the Desert Creek formation. When it came in, its MR. CLAWSON: Could you please explain the 12 12 initial production rate was over 500 barrels a day. general purpose behind today's spacing proceeding? 13 13 TARIQ AHMAD: Okay. The two wells which are There was no natural gas pipeline to the field at 14 14 that -- back at that time, so they had to compress currently there, one is producing the 3-19 and the 15 15 the gas and take it to -- by truck to some pipeline 1-19, after we looked at it, we saw what the -- how 16 16 much oil is in that area. The only way to increase area. 17 17 Thereafter, the additional wells were your ultimate recovery was to drill a horizontal 18 18 drilled in the same area to delineate this field. well. These -- this particular field is basically 19 19 Most of the -- I think all the wells were plugged producing from fractures. And with the vertical 20 20 except for the 3-19. But over the years, what's well, you're not going to get the drainage that you 21 21 happened is the 1-19 well had two holes in the should be getting. We have had pretty good success 22 22 casing. And because of the holes in the casing, with Questar, for example, up in the Brandon Bottoms 23 23 they -- the previous operators, they cemented the area where we are partners with them, where they have 24 24 holes and put the well back in production and came drilled a lot of horizontal wells in -- in basically 25 25 back online and did pretty well. But then they had a very minimal stripper oil field and had great

Page 11

Page 13

		_	
1	success.	1	MR. CLAWSON: And and but who owns
2	So similarly, in this area, we feel that if	2	the the surface?
3	we were to drill a horizontal well, he can drain both	3	TARIQ AHMAD: United States.
4	the upper Ismay and the Desert Creek from a single	4	MR. CLAWSON: Okay. Now, I would refer you
5	single well bore with two laterals and take drain	5	to Exhibit 18.
6	the whole 160 acres from from that one well. And	6	(Exhibit 18 was discussed.)
7	at the same time, produce by gravity drainage, off	7	TARIQ AHMAD: Yes, sir.
8	the two well bores which are there.	8	MR. CLAWSON: Which is labeled ownership
9	MR. CLAWSON: So MAR/REG intends to continue	9	interests.
10	producing the vertical wells, even if it drills the	10	TARIQ AHMAD: Right.
11	horizontal well?	11	MR. CLAWSON: Have you examined this exhibit
12	TARIQ AHMAD: Yes, it does.	12	and are you familiar with it?
13	MR. CLAWSON: And will you commingle the	13	TARIQ AHMAD: I have and I am familiar with
14	production, the horizontal well and the two different	14	it.
15	intervals, will you commingle that production?	15	MR. CLAWSON: And and what does this
16	TARIQ AHMAD: Yes.	16	exhibit tell us?
		17	
17	MR. CLAWSON: Okay. Now I refer you to		TARIQ AHMAD: It tells us the ownership of
18	Exhibit No. 3.	18	Section 19.
19	(Exhibit No. 3 was discussed.)	19	MR. CLAWSON: All of the ownership?
20	MR. CLAWSON: Have you examined this exhibit	20	TARIQ AHMAD: Yes.
21	and are you familiar with it?	21	MR. CLAWSON: Who owns the the who are
22	TARIQ AHMAD: I have.	22	the leasehold owners in the northeast corner of
23	MR. CLAWSON: Can you please tell us what	23	Section 19?
24	this shows?	24	TARIQ AHMAD: The record title is owned by
25	TARIQ AHMAD: This well shows the ownership	25	QEP Energy and Exxon Mobil, 50 percent. And the
	Page 14	4	Page 16
1	with this this Exhibit shows the ownership in	1	operator rights are owned by Nathan Oil, LLC, and
2	Section 19 and surrounding areas and what which	2	75 percent, and QEP Energy, 25 percent.
3	section which parts are on lease, for example. In	3	MR. CLAWSON: And is MAR/REG associated with
4	Section 19, the northwest quarter is unleased and so	4	Nathan Oil?
5	is the southeast quarter.	5	TARIQ AHMAD: Yes, they're associated
6	The northeast and the southwest quarters are	6	companies.
7	on the same lease. You	7	
8		8	MR. CLAWSON: And QEP Energy company owns
	(School bell sounding.)		the 25 percent working interest in the subject lands?
9	(Clarification by court reporter.)	9	TARIQ AHMAD: Yes.
10	THE WITNESS: I'm saying the northeast	10	MR. CLAWSON: Or corroborating rights?
11	quarter and the southwest quarter are on the same	11	TARIQ AHMAD: Yes.
12	lease and section land.	12	MR. CLAWSON: Does QEP support MAR/REG's
13	MR. CLAWSON: And what is that lease number?	13	request in spacing for the northeast quarter?
14	TARIQ AHMAD: U40401.	14	TARIQ AHMAD: Yes. I have talked to QEP's
15	MR. CLAWSON: Who owns the minerals in	15	Donald Chavez, and I sent him all the documents and I
16	under the under the lease?	16	got their support for this.
17	TARIQ AHMAD: U.S. Government.	17	MR. CLAWSON: Is the northeast quarter
18	MR. CLAWSON: And is the northeast quarter	18	subject to a voluntary pooling agreement?
19	of Section 9, Township 25 East, Range 26 I mean,	19	TARIQ AHMAD: It's subject to a joint
20	Township 25 South Ranch 26 East I'm saying this	20	operating agreement.
21	wrong.	21	MR. CLAWSON: And is that joint operating
22	What can you give us the legal	22	agreement Exhibit 16?
23	description of the subject lands?	23	TARIQ AHMAD: Yes, it is.
24	TARIQ AHMAD: Section 19, Township 38 South,	24	MR. CLAWSON: Have you examined and are you
25	Range 26 East.	25	familiar with Exhibit 16?
	Page 1:		Page 17
<u> </u>	1 agc 1.	<u> </u>	1 agc 17

1	TARIQ AHMAD: Yes.	1	Does the board have any objections?
2	MR. CLAWSON: And you've already testified,	2	MR. JENSEN: I noticed when you were having
3	the BLM, or the Federal Government owns the surface	3	some problems with that legal description on your
4	of the federal lands.	4	Exhibit 3, you want to shall I read it in the
5	Who administers the minerals and that sort	5	record for you, Mr. Clawson?
6	of thing?	6	It needs to say Township 26 East, Range 38
7	TARIQ AHMAD: The BLM.	7	South at the top of the exhibit so that there's
8	MR. CLAWSON: Okay. Now, I would refer you	8	not not any misunderstanding.
9	to Exhibit No. 17.	9	MR. CLAWSON: I thank you for that. That's
10	(Exhibit No. 17 was discussed.)	10	helpful. I it's the township next to it is 25
11	MR. CLAWSON: Okay. Is this the request for	11	East, so I was reading through the townships.
12	agency action that has been involved in this cause?	12	MR. JENSEN: So it should be Township 26
13	TARIQ AHMAD: Yes.	13	East, Range 38 South.
14	MR. CLAWSON: Towards the back of the	14	MR. CLAWSON: Exactly. Thank you.
15	request, there is a list of names and addresses.	15	MR. JENSEN: Okay.
16	Is this a certificate of mailing for request	16	CHAIRMAN JOHNSON: Well, I think it's
17	for agency action?	17	showing the left side of the page is Township
18	TARIQ AHMAD: Yes, it is.	18	MR. QUIGLEY: Twenty-five.
19	MR. CLAWSON: And what does it show?	19	CHAIRMAN JOHNSON: Range 25 East. And
20		20	
	TARIQ AHMAD: It shows every entity that was	21	then the right-hand side is 26 East.
21 22	sent a copy of this notice.	22	MR. CLAWSON: Right.
	MR. CLAWSON: So the owners, operators and		CHAIRMAN JOHNSON: Okay. Are there any
23	surface owners for Section I mean, the northeast	23	objections?
24	quarter section?	24	MR. JENSEN: I see I see what's
25	TARIQ AHMAD: Yes.	25	happening.
	Page 18	3	Page 20
1	MR. CLAWSON: And how did you determine	1	MR. CLAWSON: Should be a line.
2	which parties to include on that list?	2	CHAIRMAN JOHNSON: Yeah, a Township line,
3	TARIQ AHMAD: That was from the state office	3	Range line.
4	for the Bureau of Land Management, and they had all	4	Okay. So Exhibits 1, 2, 3, 16, 17, 18 are
5	the ownership records.	5	admitted.
6	MR. CLAWSON: Was the request for agency	6	Mr. Clawson?
7	action mailed to everyone on this list?	7	MR. CLAWSON: That's all the questions I
8	TARIQ AHMAD: Yes.	8	have for this witness.
9	MR. CLAWSON: Okay. Now I'd just refer you	9	CHAIRMAN JOHNSON: Okay. Mr. Donaldson?
10	back to Exhibits 1, 2, 3, 16, 17 and 18.	10	MR. DONALDSON: First of all I wanted to
11	Are these documents that that are	11	just ask, was Mr. Ahmad providing expert testimony?
12	contained in MAR/REG's business files, or were they	12	MR. CLAWSON: No, he's a fact witness.
13	prepared by MAR/REG in connection with this	13	MR. DONALDSON: Okay.
		1	MR. CLAWSON: I didn't ask him any opinions.
14	proceeding or in the regular course of MAR/REG's	14	, · ·
15	business activities?	15	MR. DONALDSON: Okay. Then the staff
16	TARIQ AHMAD: Yes.	16	members have some questions they want to pose to
17	MR. CLAWSON: Okay. That's the end of my	17	Mr. Ahmad.
18	questions for Mr. Ahmad at this moment.	18	CHAIRMAN JOHNSON: Okay. Mr. Doucet?
19	I would move that Exhibits 1, 2, 3, 16, 17	19	MR. DOUCET: Dustin Doucet, petroleum
20	and 18 be admitted.	20	engineer for the division.
21	CHAIRMAN JOHNSON: Mr. Donaldson?	21	I've got a few questions here. I had a
22	MR. DONALDSON: The Division does not object	22	question maybe you can clear up for me. On Exhibit 3
23	to the admission of the exhibits, however, we have	23	and Exhibit 18, I think it shows that it's that
24	some questions.	24	the northeast quarter and the southwest quarter are
l	CHAIDMAN JOHNSON, Okov	25	one lease, is that correct?
25	CHAIRMAN JOHNSON: Okay.	K 2	one lease; is that correct?

1	TARIQ AHMAD: That's correct, yes.	1	the lease or the well?
2	MR. DOUCET: And I believe, Mr. Clawson,	2	TARIQ AHMAD: No.
3	didn't you say the only ownership in your opening	3	MR. HAROUNY: The the owner is 75 percent
	testimony was the northeast quarter that you guys	4	Nathan Oil?
	had?	5	TARIQ AHMAD: That's correct.
	MR. CLAWSON: That's correct.	6	MR. HAROUNY: And did you have any do you
	MR. DOUCET: So you don't have the entire	7	have their consent in writing to proceed with this.
	lease?	8	TARIQ AHMAD: I'm the managing partner of
	TARIQ AHMAD: That's correct.	9	Nathan Oil. I've given all of my consent.
	MR. DOUCET: Just a portion of the lease.	10	MR. HAROUNY: Okay. But you have it as a
	And that JOA is for the northeast quarter?	11	matter of documentation?
	TARIQ AHMAD: That's correct.	12	TARIQ AHMAD: You mean in the record?
	MR. DOUCET: Okay.	13	MR. HAROUNY: Yes.
	MR. CLAWSON: Well, I	14	MR. CLAWSON: We haven't included it.
	TARIQ AHMAD: At least. At least.	15	MR. HAROUNY: Since MAR/REG is not an owner
	MR. DOUCET: On Exhibit 18, that difference	16	MR. CLAWSON: Well, it's the operator, and
	in ownership, the stratigraphic interval, 5612	17	it's the designated operator by the owner. So it's
	5612 feet, is that is the 5612 and below, is that	18	the party that has the right to produce and develop
	the Desert Creek or is everything included in that	19	it.
	upper interval?	20	MR. HAROUNY: Develop the property.
	TARIQ AHMAD: Everything is included above	21	But you see what I'm saying? There's a
		22	MR. CLAWSON: Well, we haven't you know,
	5612. The way it was done was when the 1-19 was	23	we haven't included all of the documentation that
	drilled, it was drilled down to that depth. So they	24	
	earned everything to that point.	25	draws the line in between the original parties and
	MR. DOUCET: Okay. Page 22		MAR/REG as the operator. Page
_			60
	MR. CLAWSON: I think as a matter of	1	MR. HAROUNY: Correct.
	clarification, are both the Upper Ismay and the	2	MR. CLAWSON: But I can have my witness
	Desert Creek formation above 5612 in that?	3	MR. HAROUNY: The operating agreement
	TARIQ AHMAD: Yes.	4	doesn't have MAR/REG's name, so
	MOBASHIR AHMAD: Yes.	5	MR. CLAWSON: Correct. It's an old
	MR. DOUCET: I think that's all the	6	operating agreement, but it covers the subject lines
	questions I had.	7	and there's no dispute as to that.
	MR. DONALDSON: No more questions for this	8	TARIQ AHMAD: I'm pretty sure you're
	witness.	9	familiar with it. When you operated for me, you
	CHAIRMAN JOHNSON: Thank you, Mr. Donaldson.	10	operated under Graham Energy.
	Does the board have questions?	11	MR. HAROUNY: Right. I understand. But the
	MR. HAROUNY: I have a couple questions for	12	records don't show that MAR/REG is the operator
	Mr. Ahmad.	13	the operating agreement doesn't show that MAR/REG
	Mr. Ahmad, good to see you after so long.	14	the current operator.
	The operating agreement is between MAR/REG as the	15	MR. CLAWSON: Okay. Well, I think we can
	operator and who are the non operators?	16	correct that with his testimony.
	TARIQ AHMAD: At this point, it's QEP	17	MR. HAROUNY: I'm just trying to get the
	Energy. Questar.	18	record straight.
	MR. HAROUNY: Questar.	19	The I had another question, but that had
	TARIQ AHMAD: And Nathan Oil.	20	to do with the stratigraphic equivalent. Is there
	MR. HAROUNY: So this operating agreement is	21	a a analog log well or a well or equivalent to a
	the original operating agreement, and you are pretty	22	certain geological formation for that for the
	much the successor operator?	23	depth limitation?
	•	24	•
	TARIQ AHMAD: That's correct.	24 25	TARIQ AHMAD: You mean the 5612?
	MR. HAROUNY: Is is MAR/REG an owner in		MR. HAROUNY: Uh-huh.
	Page 23	3	Page

MR. HAROUNY: I'm talking about if the not or clot of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It — the assignments for— to a specific depth, and we are assignments for— to a specific depth, and we are assignments for— to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for example, which is the well, I think, directly example, which is the well, I think, directly the side a mountain. MR. HAROUNY: So that's what I'm trying the side a mountain. MR. HAROUNY: So that's what I'm trying the side a mountain. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I — I — I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the stratigraphic units, but — but the ownership beneath — we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to be admitted the subject lands?				
they earned the rights. NR. HAROUNY: Does it say to the base of Desert Creek? NR. CLAWSON: No. No. It's a specific			1	
they earned the rights. MR. HAROUNY: Does it say to the base of Desert Creek? MR. CLAWSON: No. No. 1s's a specific the spaced interval, which is a fine permit. MR. HAROUNY: It's a specific depth. MR. CLAWSON: Are you talking about the assignment? MR. HAROUNY: I'm talking about if the location of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It the assignments that's a really good question. The assignments that's a really good question. The assignments for to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for example, which is the well, I think, directly example, which is the well, I think, directly mortheast of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying TARIQ AHMAD: By the example, which is the well, think, directly mortheast of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying MR. HAROUNY: So that's what I'm trying TARIQ AHMAD: Which is above, you know, I off or questioning, but I'm not surface we're talking about a very specific interval in the suck of the first of the the surface we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I off or questioning, but I'm not surface WILL So the say the well and the depth. MR. HAROUNY: I have no other questions for MR. CLAWSON: I I I appreciate your line of questioning which is a bove, you know, I off or questioning which is a bove, you know, I off or questioning about two zones. MR. HAROUNY: Correct. MR. CLAWSON: Just to clarify the record. MR. CLAWSON: It like to a		•		
MR. HAROUNY: Does it say to the base of Desert Creek? MR. CLAWSON: No. No. It's a specific — the spaced interval, which is a fine permit. MR. CLAWSON: The specific depth. MR. CLAWSON: Are you talking about if the assignment? MR. HAROUNY: I'm talking about if the assignment of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth, and we are assignments b- that's a really good question. The assignments for to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for below that particular zone. And the 3-19, for long the specific or northeast of the 1-19, it is about 300 feet above on northeast of the 1-19, it is about 300 feet above on properties of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying MR. HAROUNY: So that's what I'm trying MR. HAROUNY: All I see here is a specific or number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I'm not sure that it's actually geymmen to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I and that shap only the proper shap and the ownership beneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I and that where wasting price intervals was the we're asking about two zones. MR. CLAWSON: Chay. Thank you, and that's what we're asking for to space. We're not asking that the board do anything below the De			1	
besert Creek? MR. CLAWSON: No. No. It's a specific the specific the specific depth. MR. HAROUNY: It's a specific depth. MR. HAROUNY: I'm talking about the sasignment? MR. HAROUNY: I'm talking about if the location of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It - the assignments - that's a really good question. The assignments for - to a specific depth, and we are going to be drilling. And it's a couple hundred feet sasignments of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 to - TARIQ AHMAD: Right. MR. HAROUNY: So that's what I'm trying Page 26 to - TARIQ AHMAD: Right. MR. HAROUNY: So that's what I'm trying Page 26 to - TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific interval in the ownership intervals and they share where talking about a very specific interval in the Desert Creek, and they re both defined in the agency action, and that's what we're asking for to space. We're not a sking that the board do anything beneath - we're talking about two zones. MR. HAROUNY: Correct. MR. LAWSON: Lowership intervals and what what we're tasking about two zones. MR. LAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board do anything benevath - we're not asking that the board of anything benevath - we're n				
MR. CLAWSON: No. No. 1t's a specific — the spaced interval, which is a fine permit. MR. HARQUIY: It's a specific depth. MR. CLAWSON: Are you talking about if the assignment? MR. HARQUIY: I'm talking about if the assignment? MR. HARQUIY: I'm talking about if the assignment? MR. HARQUIY: I'm talking about if the assignments and the one to be asse of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It — the assignments — that's a really good question. The assignments for — to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for example, which is the well, I think, directly northeast of the 1-19, it is about 300 feet above on the side a mountain. MR. HARQUIY: So that's what I'm trying Page 26 TARIQ AHMAD: Right. MR. HARQUIY: So that's what I'm trying MR. HARQUIY: So that's what I'm trying TARIQ AHMAD: Right. MR. HARQUIY: So that's what I'm trying MR. HARQUIY: So that's what I'm trying MR. HARQUIY: So that's what I'm trying MR. HARQUIY: The talking about two you're saying it the caption and that's a trailing about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stating about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stating about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stating about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stating about a very specific interval that the managing partner of Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: I'm to sure that it's ARCLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking fo				· · · · · · · · · · · · · · · · · · ·
the spaced interval, which is a fine permit. MR. HAROUNY: It's a specific depth. MR. CLAWSON: Are you talking about the assignment? MR. HAROUNY: I'm talking about if the location of the new well ends up being on top of a montain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It — the assignments — that's a really good question. The assignments for — to a specific depth. It — the assignments for — to a specific depth. It — the assignments for — to a specific depth. It — the assignments for — to a specific depth. It — the assignments for — to a specific depth. It — the assignments of the service of the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 to — TARIQ AHMAD: Roy. I si about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: Roy. MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: Roy. MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: Roy. MR. HAROUNY: So that's what I'm trying MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: Roy. MR. HAROUNY: So that's what I'm trying MR. HAROUNY: So that's what I'm trying MR. HAROUNY: All I see here is a specific unther, no equivalency, no to the base of such and such formation. MR. CLAWSON: I — I — I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I in Desert Creek formation, which is above, you know, I in Desert Creek formation, which is above, you know, I in Desert Creek formation, which is above, you know, I in Desert Creek formation, which is above, you know, I in Desert Creek formation, which is above, you know, I in Desert Creek formation, which is above, wh				
MR. HAROUNY: I're a specific depth. MR. CLAWSON: Are you talking about the assignment? MR. HAROUNY: I'm talking about if the assignment? MR. HAROUNY: I'm talking about if the not? MR. HAROUNY: I'm talking about if the location of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It — the assignments — that's a really good question. The assignments — that's a really good question. The going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for example, which is the well, I think, directly example,			1	
MR. CLAWSON: Are you talking about the asignment? MR. HAROUNY: I'm talking about if the location of the new well ends up being on top of a moutain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay, I understand what you're saying. It's a specific depth. It — the assignments or that's a really good question. The assignments for — to a specific depth, and we are going to be drilling. And it's a couple hundred feet point below that particular zone. And the 3-19, for example, which is the well, I think, directly example, which is the whole thing. But if it's — since the assigning says stratigraphic intervals, that is fine, the side a mountain. TARIQ AHMAD: It's not on the surface — TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: It'd like to ask a few questions on redirect. TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: Directly the record.			1	
assignment? MR. HAROUNY: I'm talking about if the location of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay, I understand what you're saying. It's a specific depth, it — the assignments or — to a specific depth, and we are going to be drilling. And it's a couple hundred feet going to be drilling. And it's a couple hundred feet or some signification of the surface — with a couple hundred feet or sample, which is the well, I think, directly or the side a mountain. MR. HAROUNY: So that's what I'm trying may be a cause were talking about a very specific interval in the surface nor death of know how high. We will have testimony as to the stratigraphic units, but — but the ownership or and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek intervels these stratigraphic intervals may be important to MAR/REG and its dealings with its parners and whatnot in terms of what it can earn and that they or asking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the poard of anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the board do anything beneath — we're tasking that the poard to anything beneath — we're tasking that the poard to anything beneath — we're tasking that the poard to anything beneath — we're tasking that the poard to anything beneath — we're tasking that		·		
MR. HAROUNY: I'm talking about if the not or clot of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It — the assignments for— to a specific depth, and we are assignments for— to a specific depth, and we are assignments for— to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for example, which is the well, I think, directly example, which is the well, I think, directly the side a mountain. MR. HAROUNY: So that's what I'm trying the side a mountain. MR. HAROUNY: So that's what I'm trying the side a mountain. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I — I — I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the stratigraphic units, but — but the ownership beneath — we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to beneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high, We will have testimony as to be admitted the subject lands?		MR. CLAWSON: Are you talking about the	1	
Contain of the new well ends up being on top of a mountain, does he get to the base of Desert Creek or not?	11	-		
mountain, does he get to the base of Desert Creek or not? TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It — the assignments for — to a specific depth, and we are assignments for — we're talking about a very specific interval in the wells. It is not on the surface — MR. HAROUNY: for — TARIQ AHMAD: It know what you're saying if the depth was 500 feet off, you would miss the whole thing. But if it's — since the assigning says stratigraphic interval, that is fine, then the — it can be adjusted for that depth. Walking about a very specific mumber, no equivalency, no to the base of such and such formation. TARIQ AHMAD: Right. TARIQ AHMAD: Right. MR. HAROUNY: So that's what I'm trying TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency on the term — it can be adjusted for that depth. well of the to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. CHAIRMAN JOHNSON: Go ahead. CHAIRMAN JOHNSON: Us a to clarify the record. You previously testified that Nathan	12			•
TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It the assignments that's a really good question. The assignments for to a specific depth, and we are going to be drilling. And it's a couple hundred feet assignments for to a specific depth, and we are going to be drilling. And it's a couple hundred feet pelow that particular zone. And the 3-19, for every countries of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying TARIQ AHMAD: Right. MR. HAROUNY: So that's what I'm trying TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I — I — I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the we're talking about a very specific interval in the we're talking about a very specific interval in the we're talking about a very specific interval in the we're talking about a very specific interval in the we're talking about a very specific interval in the stratigraphic units, but — but the ownership be important to MAR/REG and its dealings with anything below the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek intervals. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of — we're to asking that the board do anything below to asking that the board do anything below to asking that the board do anything below the Desert Creek we're not asking that the board do anything below to asking that the board do anything below the partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of — we're not asking that the board do anything below the Desert Creek	13			
TARIQ AHMAD: Okay. I understand what you're saying. It's a specific depth. It — the assignments — that's a really good question. The assignments for — to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for 21 below that particular zone. And the 3-19, for 21 cample, which is the well, I think, directly example, which is the well, I think, directly nor the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 1 to — TARIQ AHMAD: Right. MR. HAROUNY: So that's what I'm trying Page 26 1 to — TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I — I — I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I to the stratigraphic interval, but — but the ownership interests beneath the we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek, and they're both defined in the agency action, interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that's what we're asking for to space. We're not dealing with anything below the Desert Creek we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 24 we're not asking that the board do anything 25 partners and what	14	mountain, does he get to the base of Desert Creek or	1	So that geologically would mean a specific interval
you're saying. It's a specific depth. It — the assignments — that's a really good question. The assignments for — to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for example, which is the well, I think, directly example, which is the well, I think, directly northeast of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying TARIQ AHMAD: Right. TARIQ AHMAD: Right. TARIQ AHMAD: Right. TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I — I — I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but — but the ownership eneath — we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that ye of affair, but it's not on the surface — MR. HAROUNY: For — MR. HAROUNY: I know what you're saying. You're saying if the depth was 500 feet off, you would miss the whole thing, But if it's – since the assignments — the AlRADUND: I know what you're saying. You're saying it he depth was 500 feet off, you would miss the whole thing, But if it's – since the assignments — the ARROUNY: I have no other questions. Page 26 CHAIRMAN JOHNSON: Other questions for MR. CLAWSON: I'm lat be quivalency on the other assigning says stratigraphic interval, that is fine, then the — it can be adjusted for that depth. MR. CHAIRMAN JOHNSON: Other questions for MR. CLAW	15	not?	15	at that depth, whatever is that equivalent in that
assignments that's a really good question. The assignments for to a specific depth, and we are going to be drilling. And it's a couple hundred feet 20	16	TARIQ AHMAD: Okay. I understand what	16	in that quarter section, whatever wherever we did
assignments for to a specific depth, and we are going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for 21 below that particular zone. And the 3-19, for 21 below that particular zone. And the 3-19, for 21 below that particular zone. And the 3-19, for 21 cexample, which is the well, I think, directly overample, which is the well, I think, directly assign in the garding as stratigraphic interval, that is fine, the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 1 to TARIQ AHMAD: Right. MR. HAROUNY: So that's what I'm trying Page 26 1 to TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific anumber, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I - I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that's what we're asking for to space. We're not asking that the board do anything beneath MR. CLAWSON: The Upper Ismay and the Desert Creek interval and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that's what we're asking for to space. We're not asking that the board do anything beneath MR. CLAWSON: And is MAR/REG the designated operator for these two - well, for Nathan Oil's interests beneath the so stratigraphic intervals may be important to MAR/REG and its dealings with its and that type of affair, but it's not really part of MR. CLAWSON: Okay. Thank you. MR. CLAWSON: And is MAR/REG the designated operator for these two - well, for Nathan Oil's interests beneath the so stratigraphic	17	you're saying. It's a specific depth. It the	17	drill, we can have that equivalency on the other
going to be drilling. And it's a couple hundred feet below that particular zone. And the 3-19, for 21 you're saying if the depth was 500 feet off, you would miss the whole thing. But if it's since the assigning says stratigraphic interval, that is fine, then the it can be adjusted for that depth. MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: I know what you're saying. You're saying if the depth was 500 feet off, you would miss the whole thing. But if it's since the assigning says stratigraphic interval, that is fine, then the it can be adjusted for that depth. MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: Right. MR. HAROUNY: I have no other questions. Page 28 TARIQ AHMAD: No. Thank you. MR. CLAWSON: Other questions for Mr. Ahmad? MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the yer test-to-particular to would miss the whole thing. But if it's since the assigning says stratigraphic interval, that is fine, then the it can be adjusted for that depth. MR. HAROUNY: I have no other question. Page 28 MR. CLAWSON: Other questions for Mr. Ahmad? MR. CLAWSON: I dike to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Joh Clawson? MR. CLAWSON: Joh Clawson? MR. CLAWSON: ULC? TARIQ AHMAD: Tes hathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: The year erelated companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG? TARIQ AHM	18			wells. It's not on the surface
below that particular zone. And the 3-19, for example, which is the well, I think, directly northeast of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 to TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I - I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Special beneath Desert Creek, formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership linerests beneath defined in the agency action, and that's what we're asking for to space. We're not asking with anything below the Desert Creek important to MAR/REG and its dealings with its permore and whatnot in terms of what it can earn and the ownership be important to MAR/REG and its dealings with its permore and whatnot in terms of what it can earn and the ownership be important to MAR/REG and its dealings with its permore and whatnot in terms of what it can earn and the townership be important to MAR/REG and its dealings with its permore and whatnot in terms of what it can earn and the twe not asking that the board do anything beneath Vou're saying if the depth was 500 feet off, you would miss the whole thing. But if it's since the asking in the twe hole thing. But if it's since the askinging about 300 feet off, you would miss the whole thing. But if it's since the askinging says stratigraphic intervity as then the it can be adjusted for that depth. MR. HAROUNY: I have no other depth. MR. HAROUNY: I have no other depth. MR. HAROUNY: I have no other depth. MR. CHAIRMAN JOHNSON: Other questions. Page 26 CHAIRMAN JOHNSON: Other to skipn phic intervals may be important to MAR/REG and its dealings with its interest within the subject lands? TARIQ AHMAD: They are related companies	19		1	MR. HAROUNY: For
example, which is the well, I think, directly northeast of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership interval. So the assignments and the ownership intervals may be important to MAR/REG and its dealings with its pathers and whatnot in terms of what it can earn and that's what we're asking front or space. We're not asking that the board do anything below the Desert Orea, and that's what we're asking front or space. We're not asking that the board do anything beneath example, which is the well, is about 300 feet above on assigning says stratigraphic interval, that is fine, assigning says stratigraphic interval, that is fine, then the it can be adjusted for that depth. MR. HAROUNY: I have no other question. Page 28 CHAIRMAN JOHNSON: Other questions for Mr. Ahmad? (No response). Okay. Thank you. MR. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. CHAIRMAN JOHNSON: Go ahead. You previously testified that Nathan Oil, LLC. You previously testified that Nathan Oil, LLC. TARIQ AHMAD: It's Nathan Oil, LLC. TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated opport for these two well, for Nathan Oil's interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything MR. CLAWSON: O	20	going to be drilling. And it's a couple hundred feet		TARIQ AHMAD: I know what you're saying.
northeast of the 1-19, it is about 300 feet above on the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 to TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I - I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek intervals. So the assignments and the ownership be important to MAR/REG and its dealings with its the relations I have on other questions. Page 28 CHAIRMAN JOHNSON: Other questions for Mr. Ahmad? (No response). Okay. Thank you. Mr. Clawson? MR. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LLC. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LLC. MR. CLAWSON: It's Nathan Oil, LLC. MR. CLAWSON: It's Nathan Oil, LLC. MR. CLAWSON: It's Nathan Oil, LLC. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Tey, sir. MR. CLAWSON: And is MAR/REG the designated operator for these two – well, for Nathan Oil's interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of — MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	21	below that particular zone. And the 3-19, for	21	You're saying if the depth was 500 feet off, you
the side a mountain. MR. HAROUNY: So that's what I'm trying Page 26 to TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I - I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the besert Creek formation, which is above, you know, I oh't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of We'not asking that the board do anything beneath the side a mountain. MR. HAROUNY: I have no other questions. MR. CHAIRMAN JOHNSON: Other questions for Mr. Ahmad? (No response). MR. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Og ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two - well, for Nathan Oil's interests within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	22	example, which is the well, I think, directly	22	would miss the whole thing. But if it's since the
MR. HAROUNY: So that's what I'm trying Page 26 TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership intervals be important to MAR/REG and its dealings with its pe important to MAR/REG and its dealings with its per and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: Okay. Thank you. CHAIRMAN JOHNSON: Other questions. Mr. Ahmad? Mr. Ahmad? Mr. Ahmad? Mr. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. CHAIRMAN JOHNSON: Go ahead. CHAIRMAN JOHNSON: Go ahead. TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil's interest within the subject lands? TARIQ AHMAD: Tey are related companies. I am the managing partner of Nathan Oil's interest within the subject lands? TARIQ AHMAD: Tey, it is. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Tey are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Tey,	23	northeast of the 1-19, it is about 300 feet above on	23	assigning says stratigraphic interval, that is fine,
TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership intervals be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil. MR. CL	24	the side a mountain.	24	then the it can be adjusted for that depth.
TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership intervals on the stratigraphic intervals may be important to MAR/REG and its dealings with its tat type of affair, but it's not really part of we're not asking that the board do anything beneath TARIQ AHMAD: Non. Other questions for Mr. Ahmad? Mr. Ahmad? Mr. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Teys are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: Yes, it is. MR. CLAWS	25	MR. HAROUNY: So that's what I'm trying	25	
TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert MR. CLAWSON: The Upper Ismay and the Desert MR. CLAWSON: Dh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: Okay. Thank you, MR. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interests beneath the subject lands? TARIQ AHMAD: Yes, sit: MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,		Page 26		Page 28
TARIQ AHMAD: Right. MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: The Upper Ismay and the Desert MR. CLAWSON: The Upper Ismay and the Desert MR. CLAWSON: Dh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: Okay. Thank you, MR. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interests beneath the subject lands? TARIQ AHMAD: Yes, sit: MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	1	L	1	CHATDMAN JOHNSON, Other guartiers for
MR. HAROUNY: All I see here is a specific number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: Tey Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: Okay. Thank you. Mr. Clawson? MR. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions on redirect. CHAIRMAN JOHNSON: Okay. Thank you,			1	
number, no equivalency, no to the base of such and such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath CHAIRMAN JOHNSON: Okay. Thank you. Mr. CLAWSON: It'l like to ask a few questions on redirect. CHAIRMAN JOHNSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: I'd like to ask a few questions on redirect.				
such formation. MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that's we're not asking that the board do anything beneath MR. CLAWSON: I'd like to ask a few questions on redirect. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LLC. This partners and whatnot in terms of what it can earn and that's what we're asking for to space. We're not asking that the board do anything beneath MR. CLAWSON: Do, I'm sory. What is the relationship in between Nathan Oil and MAR/REG the designated operator for these two well, for Nathan Oil's interests within the subject lands? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Cokay. Thank you,				
MR. CLAWSON: I I I appreciate your line of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: I'd like to ask a few questions on redirect. CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: The Upper Ismay and the Desert MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything be neath MR. CLAWSON: And is MAR/REG TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,			1	
Iline of questioning, but I'm not sure that it's actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath CHAIRMAN JOHNSON: Okay. Thank you,				
actually germane to the spacing proceeding. Because we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not interval. So the assignments and the ownership interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath CHAIRMAN JOHNSON: Go ahead. MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,			1	
we're talking about a very specific interval in the Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: Just to clarify the record. You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,		•		•
Desert Creek formation, which is above, you know, I don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership intervals be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath You previously testified that Nathan Oil, LTD, owns the minerals beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,				
don't know how high. We will have testimony as to the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath don't know how high. We will have testimony as to the stratigraphic units, but but the ownership in beneath the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, sir. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,				
the stratigraphic units, but but the ownership beneath we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: It's Nathan Oil, LLC. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,				
beneath we're talking about two zones. MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: LLC? TARIQ AHMAD: Yes, sir. MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,				
MR. HAROUNY: Correct. MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,				· · · · · · · · · · · · · · · · · · ·
MR. CLAWSON: The Upper Ismay and the Desert Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: Oh, I'm sorry. What is the relationship in between Nathan Oil and MAR/REG? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,		<u> </u>		
Creek, and they're both defined in the agency action, and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath 17 TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,				
and that's what we're asking for to space. We're not dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: They are related companies. I am the managing partner of Nathan Oil. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	15		1	· · · · · · · · · · · · · · · · · · ·
dealing with anything below the Desert Creek interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath 25 we manuaging partner of Nathan Oil. MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	16			
interval. So the assignments and the ownership interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath MR. CLAWSON: And is MAR/REG the designated operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	17			
interests beneath these stratigraphic intervals may be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath operator for these two well, for Nathan Oil's interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	18			
be important to MAR/REG and its dealings with its partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of we're not asking that the board do anything beneath be important to MAR/REG and its dealings with its interest within the subject lands? TARIQ AHMAD: Yes, it is. MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	19	=		•
partners and whatnot in terms of what it can earn and that type of affair, but it's not really part of that type of affair type	20	- · · · · · · · · · · · · · · · · · · ·		·
that type of affair, but it's not really part of we're not asking that the board do anything beneath 23 MR. CLAWSON: Okay. So that's all the questions I have on redirect. CHAIRMAN JOHNSON: Okay. Thank you,	21		1	interest within the subject lands?
we're not asking that the board do anything 24 questions I have on redirect. beneath 25 CHAIRMAN JOHNSON: Okay. Thank you,	22	partners and whatnot in terms of what it can earn and	1	TARIQ AHMAD: Yes, it is.
beneath 25 CHAIRMAN JOHNSON: Okay. Thank you,	23	that type of affair, but it's not really part of		MR. CLAWSON: Okay. So that's all the
	24	we're not asking that the board do anything		questions I have on redirect.
Page 27 Page 29	25	beneath	25	CHAIRMAN JOHNSON: Okay. Thank you,
1 484 = 7	i	Page 27		Page 29

1	Mr. Ahmad and Mr. Clawson.	1	he's
2	Go ahead.	2	MR. CLAWSON: That's what I'm trying to do.
3	MR. CLAWSON: Thank you. Now I'd like to	3	MR. JENSEN: Yeah, I well, do you need to
4	call my second witness.	4	get into this to get him to qualify? It seems to me
5	Would you please state your name and address	5	you've probably got to qualify him on something else
6	for the Board?	6	and then let him go.
7	MOBASHIR AHMAD: Mobashir Ahmad, 12805	7	MR. CLAWSON: Well, typically, an expert
8	Thomas Creek Road, Reno, Nevada 89501.	8	witness is qualified to testify as an expert based on
9	MR. CLAWSON: What is your affiliation with	9	education and/or experience.
10	MAR/REG.	10	MR. JENSEN: Well, before you get into
11	MOBASHIR AHMAD: I'm a full-time employee of	11	this that's where I'm going. Before you get into
12		12	this specific issue as here, it seems to me, I think
	Pacific Engineering and Mining, and MAR/REG is an	13	
13	affiliated company.		you're about there, maybe you just ought to move to
14	MR. CLAWSON: And are you here today in the	14	have him qualified, be treated as an expert witness.
15	capacity of a consulting geologic petroleum	15	MR. CLAWSON: That was actually my next
16	geologist?	16	question.
17	MOBASHIR AHMAD: Well, I am an employee of	17	MR. JENSEN: Okay. Thanks.
18	Pacific Engineering, so I'm in the field and yes,	18	MR. CLAWSON: What I wanted to do, I mean,
19	I guess.	19	first of all
20	MR. CLAWSON: So you're petroleum	20	MR. JENSEN: I'm clairvoyant.
21	MOBASHIR AHMAD: Yes, correct.	21	MR. CLAWSON: Okay. He he has worked as
22	MR. CLAWSON: Could you please tell us	22	a petroleum geologist in the industry for 30 years.
23	well, what are your principal responsibilities in	23	And based on that, he's an expert in the field. I
24	that capacity?	24	also generally like to provide some foundation for
25	MOBASHIR AHMAD: Basically, what I do is I	25	his testimony when it comes to the Squaw Canyon
	Page 30		Page 32
1	look at mainly oil fields that have problems in this	1	Field, and that was the nature of that last question
2	geographic columns and look at the vent logs	2	I asked.
3	extensively to see what volumes that existed and to	3	I'm not really asking I'm I mean, I'm
4	remedy such problems. That's one of my jobs that	4	not going to ask that he be qualified as an expert in
5	concerns this testimony.	5	the Squaw Canyon Field, it's going to be more
6	MR. CLAWSON: Okay. Could you please	6	general.
7	briefly run through your education and experience?	7	MR. JENSEN: Okay.
8	MOBASHIR AHMAD: Yeah, I have my bachelor's	8	MR. CLAWSON: But I I appreciate that.
9	in geophysical engineering at Colorado School of	9	That was actually my next question.
10	Mines in 1983.	10	MR. JENSEN: Thank you.
11	COURT REPORTER: I'm sorry. Could you slow	11	MR. CLAWSON: I'd ask the Board recognize
12	down just a little bit?	12	Mr. Ahmad as an expert for purposes of geology and
13	MOBASHIR AHMAD: My bachelor's is in	13	geological interpretations for purposes of today's
13 14		14	
	geophysical engineering from Colorado School of Mines		hearing.
15	in 1983. And I have a master's in metallurgical	15	CHAIRMAN JOHNSON: Mr. Donaldson?
16	engineering from MacKay School of Mines, University	16	MR. DONALDSON: We would like some more
17	of Nevada, Reno, 2000. And basically, I've worked in	17	information about Mr. Ahmad's petroleum geology
18	the oil and gas industry since basically in college,	18	experience before we I mean
19	but full-time since like 1986.	19	CHAIRMAN JOHNSON: Do you have any specific
20	MR. CLAWSON: Are you familiar with the	20	questions, Mr. Donaldson?
21	Squaw Canyon Field in the Upper Ismay and Desert	21	MR. DONALDSON: Yes, could you could you
22	Creek Reservoir?	22	discuss your petroleum geology experience?
23	MOBASHIR AHMAD: Yes, I am.	23	MOBASHIR AHMAD: Yes. I've worked for
24	MR. JENSEN: May I ask, doesn't he	24	actually, Kaplinger & Associates was my position, and
25	doesn't he need to be qualified as an expert since	25	there we managed and assessed research for
	Page 3	1	Page 33
	- 100		

1	third-party clients, including Minoco and Minson Oil	1	Upper Ismay and the Desert Creek formations in the
2	Company.	2	vicinity of the Squaw Canyon Field?
3	And thereafter, like I said, since 1986,	3	MOBASHIR AHMAD: The Upper Ismay and Desert
4	I've been working for Pacific Energy & Mining	4	Creek are part of the Paradox Basin, which was
5	Company. So not all of those years were in petroleum	5	basically formed around 300 million years ago with
6	engineering. Some of them was were in mining	6	continental collisions between North America and
7	engineering. I'm a registered mining engineer in	7	maybe South America and Africa, or a mid-continental
8	Pakistan. I'm an enviromental manager in the state	8	collision. Thereafter, the old ancestor Rockies
9	of Nevada.	9	uplifted and the Paradox Basin was born through such
10	But as far as petroleum is concerned, we	10	sites.
11	have also worked on the Cisco field, the Tin Cup Mesa	11	And there are basically two parts of the
12	Field, and currently, I'm working on the Delta	12	of this particular basin. And we are concerned with
13	Petroleum Green Town Green River Field.	13	our fields, is in the planning sub basin. And this
14	So if you have any specific questions	14	particular field is right at the boundary line
15	that that you'd like an answer, like	15	between the north northeastern part and the
16	MR. DONALDSON: Could you discuss a little	16	southwestern part. And the northeastern part is the
17	bit the type of work you do specifically, in terms of	17	Upper Ismay formation producing formations, and
18	petroleum geology, or you have done?	18	the southwestern part is the Desert Creek. So this
19	MOBASHIR AHMAD: Yeah. Basically, what I	19	is like a critical junction.
20	look at, and what I have done is look I look at	20	But as far as Upper Ismay is concerned, the
21	the old oil fields is my main concern. And	21	basic algal mound, shallow sea formations, and Desert
22	basically, what I look at there is what has the other	22	Creek is basically near shore linear features.
23	company done wrong, for example, and what areas they	23	There and essentially, other than that, if you are
24	have missed, what lateral continuity there is, and	24	in Upper Ismay and Desert Creek, what can I say?
25	that's about it.	25	Upper Ismay is basically mostly limestone with some
	Page 34	ı	Page 36
1	MR. CLAWSON: Do you examine well lots?	1	variation of dolomite and limestone. And the Desert
2	THE WITNESS: Yes, I do.	2	Creek is mostly dolomite. And I can give you some
3	MR. CLAWSON: Do you examine geological	3	averages. Like, it's not exactly limestone.
4	maps?	4	Like, you know, our particular 1-19, the
5	MOBASHIR AHMAD: Yes.	5	three initial zones that are producing. The first
6	MR. CLAWSON: Do you do geological	6	zone, I should not go into depth, it's 11 feet. The
7	interpretation?	7	second zone is six feet. The third zone is six feet.
8	THE WITNESS: Yes, I do.	8	And there is some interpretation as to exactly, you
9	MR. DONALDSON: Okay. We don't have any	9	know, that the discrimination of the said zones.
10	objection.	10	But the top zone is like 76 percent
11	CHAIRMAN JOHNSON: Does the board have any	11	dolomite, balance is limestone. So I don't need to
12	questions or objections?	12	mention that. Second zone is 37 percent dolomite,
13	(No response.)	13	and the bottom zone is 74 percent dolomite. So these
14	Okay. Then we will recognize Mr. Ahmad as	14	are not entirely homogeneous formations. They are
15	an expert as you have requested for purposes of the	15	somewhat mixed formations. With how we define the
16	hearing.	16	producing zone is through basic porosity and
17	MR. CLAWSON: Okay. Thank you very much.	17	permeability. And the bottom of Desert Creek is
18	Now I would refer you to Exhibit No. 4. Are	18	basically it's both of these formations are
19	you have you examined this exhibit and are you	19	separated by an impermeable layer and hydrite. So
20	familiar with it?	20	then they are both considered separate zones. And
21	(Exhibit 4 was discussed.)	21	that's about it.
22	MOBASHIR AHMAD: Yes, I have. Exhibit 4 is	22	MR. CLAWSON: When you are talking about
23	a reference section. And that is, again, from the	23	these zones, are have you examined the request for
24	final report of Utah Geological Survey.	24	agency action?
25	MR. CLAWSON: Could you please describe the	25	MOBASHIR AHMAD: Yes, I have.
	Page 33	;	Page 37

		_	
1	MR. CLAWSON: And when you're talking about	1	There is basically a seal between or on
2	these separate zones, are these the same as the	2	both the formations so the oil does not escape, and
3	spaced intervals that are described in the request	3	the oil originates from the shale.
4	for agency action?	4	MR. CLAWSON: So your so the two
5	MOBASHIR AHMAD: Yes, they are.	5	different intervals are separate and distinct?
6	MR. CLAWSON: Okay.	6	MOBASHIR AHMAD: Correct.
7	MOBASHIR AHMAD: I can give you the, you	7	MR. CLAWSON: Okay. Now, I'd refer you to
8	know, the depths and information.	8	Exhibit No. 10.
9	MR. CLAWSON: Well, you can if to save	9	(Exhibit 10 was discussed.)
10	time, I mean, I think we can just do it by reference	10	Have you exhibit Exhibit 10, are you
11	to the request for agency action.	11	familiar with it?
12	MOBASHIR AHMAD: I would like to clarify	12	MOBASHIR AHMAD: Yes.
13	though one thing.	13	MR. CLAWSON: Could you please describe this
14	MR. CLAWSON: Okay. Well then do that.	14	exhibit for for the board?
15	MOBASHIR AHMAD: That was our board member's	15	MOBASHIR AHMAD: Exhibit 10 is basically,
16	question, Mr. Jake's. For agency action, we are	16	let's say, Upper Ismay carbonate structure map that
17	requesting properties being from about 5250 to 5400	17	tells you the sea level depths and how far below sea
18	kelly bushing. And kelly bushing is technically	18	level most of the Upper Ismay is below the said we
19	aboveground, so that makes it basically 5240 to 5390,	19	are looking at Section 19, and the scale on it can be
20	which is which basically let me make sure this	20	found not very easily, but the quarter section is
21	is correct which is basically minus 234 to minus	21	right in the center. So that's 2640, or whatever
22	384 sea level. Okay? This is for the Upper Ismay.	22	-
23	As far as the Desert Creek is concerned, the	23	half of 5280 is, I think it is.
24	·		And let's see, it also shows the proposed
	agency action was 5480 to 5580 kelly bushing. Again,	24	location. It shows you the concerned wells, 1-19, or
25	10 feet difference is 5470 to 5470 yeah to	25	19-1 and 3-19. It incorrectly shows the 1019
	Page 3	8	Page 40
1	5570 5 A LIL A LA II ACA		
1	5570. Excuse me. And the sea level depths are 464	1	Federal it calls it the Chambers. That's not
2	to 564 below sea level. So that should clarify the	2	called the Chambers on the DOGN. It's called Squaw
3	exact intervals.	3	Canyon Federal 1019 and it shows as a producing well,
4	MR. CLAWSON: Okay. Are there any other	4	all production. This was plugged and abandoned.
5	important parameters about the spaced intervals, the	5	It also shows McCulloch 19-2, and that's
6	Upper Ismay and the Desert Creek, that you wish to	6	I think that's yeah, that is it's Federal 19-2
7	discuss? You had talked about porosity.	7	now, and that is also a plugged and dry well.
8	MOBASHIR AHMAD: Yeah, the porosity is	8	And what it does not show is the Three
9	basically, in the Upper Ismay, the average porosity	9	Amigos well. And Three Amigos well is somewhere, if
10	is around 14 percent. And the permeability in the	10	you draw well, let's see. Federal 19-2 is 150
11	same formation varies all over the place. You go	11	feet from the north line, and Three Amigos is 715
12	from test let's say point half percent to or	12	feet from the north line. And it's if you connect
13	immediate arrises to four, five. But the average	13	a line between 19-2 and 3-19, it should be somewhere
14	calculation was like 1.4 and that's like in reference	14	along along that line. And that was also a dry
15	to calculation. I think everything is submitted on	15	hole.
16	the exhibits. The permeability of the Desert Creek	16	MR. JENSEN: That would be to the east then
17	is around 16 percent. And let's see. What else?	17	on that
18	MR. CLAWSON: Percent or	18	MOBASHIR AHMAD: Yes.
19	TARIQ AHMAD: You mean the porosity is 16	19	CHAIRMAN JOHNSON: Let's let's back up a
20	percent.	20	little bit here.
21	MOBASHIR AHMAD: Yes, correct. Oh, excuse	21	MOBASHIR AHMAD: Okay.
22	me. The permeability is definitely not.	22	CHAIRMAN JOHNSON: Okay. First of all,
23	Other than that, let me do bring in one	23	where did this map come from?
24	thing, so this will clarify. You wanted to see what	24	MOBASHIR AHMAD: Oh, this comes from
25	the what the differentiated	25	Marathon and McCulloch Oil Company.
	Page 3	9	Page 41
	1 age 3		1 agc 41

	-		
1	CHAIRMAN JOHNSON: Okay.	1	COURT REPORTER: I'm sorry. 1-19 and 3-19,
2	MOBASHIR AHMAD: And this is	2	and what did you say after that?
3	CHAIRMAN JOHNSON: And is it a portion of a	3	MOBASHIR AHMAD: What my interest in this
4	larger map?	4	thing, this is outside our quarter section, is to
5	MOBASHIR AHMAD: Yes, it is.	5	establish continuity between Squaw Canyon 1-19 and
6	CHAIRMAN JOHNSON: And do you know the name	6	3-19. These numbers have been transposed. And quite
7	of the larger map that it came from?	7	often, in the DOGM records, a lot of older wells are
8	MOBASHIR AHMAD: This is their internal	8	transposed.
9	study. It's not for publication, but we can send you	9	MR. CLAWSON: Mr. Chairman, for purposes of
10	a record if you wish.	10	clarifying the record, can I ask him some questions?
11	CHAIRMAN JOHNSON: Okay. Now, the the	11	CHAIRMAN JOHNSON: Yes. I would appreciate
12	Chambers 16-18 Federal well that is in the northeast	12	that.
13	portion of this map.	13	MR. CLAWSON: Okay. Let's go back to the
14	MOBASHIR AHMAD: Yeah, Squaw Canyon.	14	beginning.
15	CHAIRMAN JOHNSON: You say that's	15	MOBASHIR AHMAD: Okay.
16	incorrectly identified?	16	MR. CLAWSON: Looking at Exhibit No. 10,
17	MOBASHIR AHMAD: No. No. That's there's	17	
18		18	is is this a map of subject Section 19? MOBASHIR AHMAD: Yes.
19	six there's six the that's these things	19	
	are labeled incorrectly. Okay? There's no such		MR. CLAWSON: And are the subject lands, the
20	thing as Chamber 16-18 upon the records. It's called	20	northeast quarter of Section 19, where we see the
21	Squaw Canyon Federal 16-18.	21	3-19 Fed and the McCulloch 19-1?
22	MR. CLAWSON: Go slow.	22	MOBASHIR AHMAD: Yes.
23	MOBASHIR AHMAD: All right.	23	MR. CLAWSON: Okay. Is this a record that
24	CHAIRMAN JOHNSON: Okay. So the so the	24	is part of MAR/REG's business files?
25	Chamber 1618 Federal well on the northeast part of	25	MOBASHIR AHMAD: Yes.
	Page 42		Page 44
1	the map	1	MR. CLAWSON: Where did MAR/REG get this
2	MOBASHIR AHMAD: Uh-huh.	2	from?
3	CHAIRMAN JOHNSON: is actually the Squaw	3	MOBASHIR AHMAD: This is an internal memo
4	Canyon?	4	for Marathon Oil and McCulloch Oil Company.
5	MOBASHIR AHMAD: Correct.	5	MR. CLAWSON: So it was generated by those
6	CHAIRMAN JOHNSON: Squaw Canyon, what	6	two companies?
7	number?	7	MOBASHIR AHMAD: Correct.
8	MOBASHIR AHMAD: Hang on. This should be	8	MR. CLAWSON: And do you know how they
9	MR. HAROUNY: Which well is that?	9	generated it?
10	CHAIRMAN JOHNSON: This one.	10	=
11	MOBASHIR AHMAD: Oh, I only have two here,	11	MOBASHIR AHMAD: They generated it through the the the depths that they found when they
12	• • • • • • • • • • • • • • • • • • • •	12	were drilling the wells, and it is pretty much
13	which is, let's see, make sure this DD 5605. I don't	13	
	think there is such a there is some yes. I		correct to our side. This is the porosity structure
14	cannot locate that according to my according to my	14	of the Upper Ismay.
15	records. Yeah, I have another summary sheet, which	15	MR. CLAWSON: So you have examined the
16	is Exhibit 19.	16	evidence that's presented to the extent that you have
17	MR. CLAWSON: Well, we haven't gotten to	17	in your possession MAR/REG has in its
18	that yet.	18	possession you have examined the evidence that's
19	MOBASHIR AHMAD: Okay. And in Section 18,	19	portrayed on this map, and it conforms to your
20	we have two wells, one of which is in the let's	20	interpretation?
21	see I do not see Chamber 1618 anywhere. But	21	MOBASHIR AHMAD: Yes. Especially except
22	that's outside the subject matter, and we're not	22	for this well, as you have noticed, there's no depth
23	really handling that. The only thing we're concerned	23	written for the porosity on this.
24	about in this particular or in my testimony is	24	MR. CLAWSON: Okay. When you say "this
25	between 1-19 and 3-19.	25	well," what well are you talking about?
	Page 43		Page 45
		1	

1	MOBASHIR AHMAD: The 16-18.	1	And the only one that's left over is this
2	MR. CLAWSON: And that's in the upper	2	unknown 16-18; however, we do have two wells in
3	right-hand corner?	3	Section 18. One is in the southeast corner of the
4	MOBASHIR AHMAD: Right. Section 18.	4	southwest quarter, and the other is in the northwest
5	MR. CLAWSON: Okay. Is this a map of the	5	corner of the southwest quarter.
6	Squaw Canyon Field.	6	And both of these were essentially dry
7	MOBASHIR AHMAD: Yes, it is.	7	holes. Oh, one location is abandoned. Excuse me.
8	MR. CLAWSON: Are there any well, you	8	MR. CLAWSON: So on this Exhibit 10, the
9	you briefly just testified a little do you know	9	Chambers 16-18 well that's plotted on this map
10	the vintage of this map?	10	doesn't show up in the divisions records.
11	MOBASHIR AHMAD: I think it was 1980, early	11	MOBASHIR AHMAD: Just give me one second.
12	'80s.	12	Let me just
13	MR. CLAWSON: And when you compare well	13	MR. CLAWSON: Is that right?
14	numbers from records going back to 1980 and bring	14	MOBASHIR AHMAD: Let me just verify here.
15	them forward, is it is it does it happen that	15	The closest well that I have on my records is
16	the numbers are transposed?	16	820 feet from the south line, 2140 feet from the west
17	MOBASHIR AHMAD: Often.	17	line. So obviously, that's not the same well.
18	MR. CLAWSON: Do you find that going on on	18	MR. CLAWSON: So so going back to my
19	this map?	19	question. Southeast.
20	MOBASHIR AHMAD: Yes. Let me cover the	20	MOBASHIR AHMAD: Okay. That's correct. So
21	we have basically six wells on this on this	21	the proper name is Squaw Canyon Federal 16-18.
22	particular map. Five have been correlated as to	22	MR. CLAWSON: Okay.
23	their depths. That is let's see. This is 19-1.	23	MOBASHIR AHMAD: Okay. My fault. I had it
24	And that is that's correlated with our records.	24	marked. And that was marked and abandoned.
25	Then I will just be first one is instead	25	MR. HAROUNY: Which one was
	Page 4	6	Page 48
			MODERNIA ANNA THE STATE OF THE
1	of McCulloch 19-1, that's Squaw Canyon 1-19.	1	MOBASHIR AHMAD: The Chambers 16-18, the
2	MR. CLAWSON: And where is that?	2	proper name is Squaw Canyon Federal 16-18. And this
3	MOBASHIR AHMAD: This is in the southwest	3	was plugged and abandoned as marked, but had a slight
4	southeast corner of of of off the quarter	4	gassier in the Upper Ismay.
5	section of the subject lands.	5	MR. CLAWSON: So having clarified this
6	CHAIRMAN JOHNSON: So southeast of the	7	exhibit and corrected some of the labeling issues,
7	northeast.	8	can you please tell us the importance of this map?
8	MR. CLAWSON: (Nods head.)		MOBASHIR AHMAD: This basically shows you
9	MOBASHIR AHMAD: Yes. Yeah, the subject	9	the depths to the Upper Ismay porosity zones of
10	land in this question is northeast. Then going down,	10	porosity. And it's it's it's correct mostly,
11	we have Federal 3-19. It's written as McCord	12	except for establishes some continuity between 19
12 13	(phonetic) 3-19. That is Federal 3-19.	13	I will read it to expedite matters as it's labeled on
	MR. CLAWSON: And that's located	14	the map so you can follow it.
14	MOBASHIR AHMAD: In yes on the		MR. CLAWSON: That would be useful.
15	northwest corner of the northeast quarter.	15	MOBASHIR AHMAD: The the continuity
16	MR. CLAWSON: Okay.	16 17	structure that's showing would be McCord 3-19 and
17 18	MOBASHIR AHMAD: And then McCulloch 19-2 is	18	McCord Tin Cup Federal 1-18 does not really exist. CHAIRMAN JOHNSON: Does say that again.
шο	Fodoral 10.2 and that is in the control parties of		CHAIRMAN JUHNSUN, DOES Sav Mal audin.
	Federal 19-2, and that is in the central portion of		, -
19	the northwest quarter.	19	MOBASHIR AHMAD: What this map is showing is
19 20	the northwest quarter. And then Chambers 10-19, which is in the	19 20	MOBASHIR AHMAD: What this map is showing is the above sea level, right, with the negative depths
19 20 21	the northwest quarter. And then Chambers 10-19, which is in the south central part of the southeast quarter, is	19 20 21	MOBASHIR AHMAD: What this map is showing is the above sea level, right, with the negative depths to the Upper Ismay porosity structure as determined
19 20 21 22	the northwest quarter. And then Chambers 10-19, which is in the south central part of the southeast quarter, is property known as Squaw Canyon Federal 10-19.	19 20 21 22	MOBASHIR AHMAD: What this map is showing is the above sea level, right, with the negative depths to the Upper Ismay porosity structure as determined in the early '80s by Marathon and McCulloch.
19 20 21 22 23	the northwest quarter. And then Chambers 10-19, which is in the south central part of the southeast quarter, is property known as Squaw Canyon Federal 10-19. And then in Section 18, south central is	19 20 21 22 23	MOBASHIR AHMAD: What this map is showing is the above sea level, right, with the negative depths to the Upper Ismay porosity structure as determined in the early '80s by Marathon and McCulloch. The depths written to the porosity zones are
19 20 21 22 23 24	the northwest quarter. And then Chambers 10-19, which is in the south central part of the southeast quarter, is property known as Squaw Canyon Federal 10-19. And then in Section 18, south central is McCord called federal 1-18, and that is property	19 20 21 22 23 24	MOBASHIR AHMAD: What this map is showing is the above sea level, right, with the negative depths to the Upper Ismay porosity structure as determined in the early '80s by Marathon and McCulloch. The depths written to the porosity zones are correct; however, some of the continuity that is
19 20 21 22 23	the northwest quarter. And then Chambers 10-19, which is in the south central part of the southeast quarter, is property known as Squaw Canyon Federal 10-19. And then in Section 18, south central is	19 20 21 22 23 24 25	MOBASHIR AHMAD: What this map is showing is the above sea level, right, with the negative depths to the Upper Ismay porosity structure as determined in the early '80s by Marathon and McCulloch. The depths written to the porosity zones are

1	and McCord Tin Cup Federal 1-18.	1	all that familiar with the nature of this clay
2	MR. JENSEN: How can you say that? What's	2	concept.
3	your basis?	3	MOBASHIR AHMAD: Essentially, what we are
4	MOBASHIR AHMAD: What's my basis? The quite	4	trying to establish and the reason for us to come in
5	evident basis is in the dry hole.	5	front of the board is that we believe there is
6	MR. JENSEN: The Tin Cup 1-18?	6	continuity in the northeast quarter of the section,
7	MOBASHIR AHMAD: Yes.	7	looking for the algal mounds. Or especially in the
8	CHAIRMAN JOHNSON: Mr. Clawson, what's the	8	Upper Ismay, and possibly and at least from our
9	purpose of this exhibit?	9	lots, in the Desert Creek.
10	MR. CLAWSON: I would say it's to show the	10	Now, just because a structure is laid, it
11	structural area extent of the algal mound.	11	also matters where the source rocks are, if there is
12	CHAIRMAN JOHNSON: But Mr. Ahmad is just	12	a cap rock on top, they've got the oldest ones
13	saying he doesn't agree with you.	13	standing. Especially, those algal mounds are not
14	MR. CLAWSON: He doesn't agree with the	14	very extensive features. They would start and
15	CHAIRMAN JOHNSON: The continuity.	15	finish.
16	MR. CLAWSON: We're clarifying something.	16	MR. CLAWSON: Let me interrupt you there.
17	MR. HAROUNY: He doesn't agree with the	17	Would you please tell the board what an algal mound
18	names either.	18	is?
19	MR. CLAWSON: Well, no. The names do	19	MOBASHIR AHMAD: An algal mound is an air
20	change.	20	shore feature that is that is left over after
21	MR. HAROUNY: This map doesn't show any	21	after the deposition. And that's
22	continuity.	22	MR. CLAWSON: Are they are they
23		23	MOBASHIR AHMAD: They are hold straws.
23 24	MOBASHIR AHMAD: This just shows the this	24	•
24 25	is basically showing the structural relationship of	25	MR. CLAWSON: I'm sorry?
23	the formations, but it does correlate it to the		MOBASHIR AHMAD: They're hold straws, but in
	Page 50)	Page 52
1	porosity zones in the Upper Ismay.	1	the oil company or someplace else, they will
2	MR. HAROUNY: Okay. But the dry hole is on	2	regain
3	the other side of the productive porosity zone.	3	MR. CLAWSON: Are they a blanket sheet
4	THE WITNESS: Yeah, it shows you the depth	4	sediment?
5	of the projected structure, like minus 329 feet below	5	MOBASHIR AHMAD: Not necessarily, no.
6	sea level. But the only thing I am referring to, and	6	They're discontinuous features. Semi-continuous.
7	maybe it's the confusion, is even though the porosity	7	MR. CLAWSON: Are they limited?
8	zone exists there, there is no oil there because that	8	MOBASHIR AHMAD: Yes.
9	is a dry hole. That is what I say.	9	MR. CLAWSON: Are are they small
10	MR. CLAWSON: So just to clarify, the map is	10	features?
11	accurate in terms of porosity, but that doesn't	11	
12		12	MOBASHIR AHMAD: Yes.
	necessarily mean that there's oil there?	13	MR. CLAWSON: Isn't Squaw Canyon Field a
13	Does that help?		small feature?
14	MR. JENSEN: I hear. I just don't know what	14	MOBASHIR AHMAD: Yes, it is.
15	it means. And I explained in general, relative	15	MR. CLAWSON: If it's a small feature, is
16	relative to your request.	16	is it well so based on Exhibit 10, and your
17	MOBASHIR AHMAD: It's irrelevant, actually.	17	analysis of the records and and this map, does
18	MR. CLAWSON: Your statement is irrelevant?	18	this give a picture of the aerial extent of of the
19	MOBASHIR AHMAD: Correct.	19	productive or the possible productive zone in the
20	MR. CLAWSON: Your correlation per your	20	Desert Creek formation?
21	testimony is irrelevant.	21	MOBASHIR AHMAD: Yes, it does.
22	MOBASHIR AHMAD: Correct.	22	MR. CLAWSON: For in the spaced
23	MR. CLAWSON: But I think we need to step	23	intervals?
24	back a bit and establish what an algal mound is,	24	MOBASHIR AHMAD: Yes.
25	because some of the members of the board may not be	25	MR. CLAWSON: Testifying on the request for
-	•		, - .

1	action?	1	Thank you, Mr. Chairman.
2	MOBASHIR AHMAD: Yes.	2	I want to briefly touch again on Exhibit 10,
3	MR. CLAWSON: Is that the general purpose of	3	try to try to clarify once again, and and ask
4	this?	4	my witness, is does Exhibit 10 is it mapped on
5	MOBASHIR AHMAD: Yes, it is.	5	porosity, the Desert Creek Formation?
6	MR. CLAWSON: Does that help?	6	MOBASHIR AHMAD: No, it is not.
7	MR. HAROUNY: You kind of lost me. Sorry.	7	MR. CLAWSON: What is it mapped on?
8	The general purpose is if it is to establish	8	MOBASHIR AHMAD: It is mapped on the
9	porosity throughout the upper upper part of	9	structural depth to the Upper Ismay carbonate
10	Section 19, and the subject part of Section 18, and	10	structure.
11	the and the porosity zones, which basically	11	MR. CLAWSON: To the base of the Upper
12	Ismay Upper Ismay formation, that's okay.	12	Ismay?
13	But what is the feature that makes it	13	MOBASHIR AHMAD: No, to the top of the Upper
14		14	Ismay, carbonate structures specifically in the Upper
15	noncontinuous, the porosity zone's there but why is	15	
16	it is it not saturated? So the issue being is	16	Ismay. MR. CLAWSON: Oh, I'm sorry. I jumped
17	where is the oil water contact, if you will, and		the state of the s
	where is saturation point or not, and at what point	17	ahead. My fault. So it's not to the the top of
18	in time the current proposed well is well outside of	18 19	the Upper Ismay?
19	that line. At what point in time it's going to be		MOBASHIR AHMAD: Correct.
20	horizontal horizontal, and what point in time it's	20	MR. CLAWSON: Okay. Now I'd like you to
21	going to be within the porosity zone.	21	refer to Exhibit No. 11.
22	MR. CLAWSON: That's testimony that's going	22	Have you examined this exhibit and are you
23	to come later. With with as to the as to	23	familiar with it?
24	where the horizontal well will intercept. I mean,	24	MOBASHIR AHMAD: Yes, I have.
25	we're trying to establish an existence of the pull	25	MR. CLAWSON: Is is this a a similar
	Page 54		Page 56
1	between the northeast corner.	1	type map that was produced by a prior owner of of
2	MOBASHIR AHMAD: May I say something?	2	these properties?
3	I think what has led to confusion is there's	3	·
4	some technical terms which you are not quite	4	MOBASHIR AHMAD: It's been it's produced similarly to Exhibit 10.
5	understanding. 1-19 is above and outside our agency	5	· · · · · · · · · · · · · · · · · · ·
	action request. Our agency agent [sic] request is	6	MR. CLAWSON: By the same parties that
6 7	for the northeast quarter. And I have established to	7	produced Exhibit 10?
8	answering the questions of our attorney, that there	8	MOBASHIR AHMAD: Yes. Yes. And it is part
	- · · · · · · · · · · · · · · · · · · ·	9	of the larger map produced.
9	is continuity between 1-19 and 3-19. And this is		MR. CLAWSON: And are we looking at subject
10	outside of the subject matter for this hearing.	10 11	Section 19 again?
11 12	I just mentioned that a fact in passing, and	12	MOBASHIR AHMAD: Exactly the same.
13	I've not do not mean to	13	MR. CLAWSON: And and the wells, as they
	MR. CLAWSON: It's been suggested that maybe		are labeled on this exhibit, have the same
14	we take a five-minute break.	14	relationship that you already testified to on
15	MR. JENSEN: I think that would be a good	15	Exhibit 10?
16	idea.	16	MOBASHIR AHMAD: Yes.
17	CHAIRMAN JOHNSON: Let's take a five-minute	17	MR. CLAWSON: Would you please tell us what
18	break.	18	this exhibit and what it shows what this exhibit
19	MR. HAROUNY: I need	19	is and what it shows.
20	CHAIRMAN JOHNSON: Okay. It's let's	20	MOBASHIR AHMAD: This an ISO pack which
21	reconvene at five minutes until 11.	21	basically shows the thickness of the Upper Ismay
22	(Short recess taken.)	22	carbonate beneath the subject lands.
23	MR. JOHNSON: Okay. Mr. Clawson, go ahead.	23	MR. CLAWSON: And what is what is an ISO
24	MR. CLAWSON: Thank you, Mr. Chairman. I	24	pack?
0 -	1. 1 .	hг	MODACUTO ALIMAD TOO !!!
25	want to Page 55	25	MOBASHIR AHMAD: ISO pack shows the Page 57

	thickness of the particular zone of concern.	1	MR. CLAWSON: Have you examined the Three
2	MR. CLAWSON: Does this show any real extent	2	Amigos well?
3	of the expected pool	3	MOBASHIR AHMAD: Yes.
4	MOBASHIR AHMAD: (Nods head).	4	MR. CLAWSON: And would the would
5	MR. CLAWSON: in the upper Ismay	5	would does that well provide any information that
6	formation?	6	would change your interpretation?
7	MOBASHIR AHMAD: Yes, it does.	7	MOBASHIR AHMAD: No, it does not.
8	MR. CLAWSON: Okay. Now I'd like to move on	8	MR. CLAWSON: Did you generate this map?
9	to Exhibit No. 12.	9	MOBASHIR AHMAD: Yes, I did.
10	(Exhibit 12 was discussed.)	10	MR. HAROUNY: Mr. Clawson, can I can I
11	MR. CLAWSON: Are you familiar with this	11	please
12	exhibit, and have you examined it?	12	MR. CLAWSON: Yeah, sure.
13	MOBASHIR AHMAD: Yes, I have.	13	MR. HAROUNY: What if if I lost this
14	MR. CLAWSON: Could you please provide us	14	sheet of paper, how would I find it somewhere and
15	with a description of what this exhibit is.	15	what would it be pertaining what, besides there
16	MOBASHIR AHMAD: This shows you the Desert	16	is no range or section on it.
17	Creek structure similar to Exhibit 10 for the Upper	17	MR. CLAWSON: Right. And he just testified
	Ismay structure.	18	that the rectangle is subject to Section 19, which is
19	MR. CLAWSON: Okay. Is this rectangular box	19	the same, you know, town section that we've been
20	equivalent to subject Section 19?	20	dealing wit.
21	MOBASHIR AHMAD: Yes, it is.	21	MR. HAROUNY: Okay.
22	MR. CLAWSON: And first of all, is this the	22	MR. CLAWSON: And he also testified that the
23	Desert Creek structure map?	23	wells 3-19 and the 1-9, which should be 1-19.
24	MOBASHIR AHMAD: Yes, it is.	24	MR. HAROUNY: So this is we should put a
25	MR. CLAWSON: Okay. And and these the	25	big 19 in the middle of this somewhere. This is
	Page 58	;	Page 60
1	and an about 1 10 there	1	Cartina 103
1	numbers, the 3-19 and another number, 1-19, those	1	Section 19?
2	represent the wells that exist in the northeast	2	MR. CLAWSON: Right. It should have a
3	quarter of Section 19?	3	MR. HAROUNY: I know that, but for purpose
4	MOBASHIR AHMAD: Correct.	4	of identification for exhibits
5	CHAIRMAN JOHNSON: Mr. Clawson.	5	MR. CLAWSON: I agree. It should have a lot
6	MR. CLAWSON: Is there a	6	more labels on it.
7	CHAIRMAN JOHNSON: Wait, just a minute.	7	MR. QUIGLEY: So my question is: is 1-19 the
8	First of all, I don't see a 1-19 on this	8	same well as 19-1?
9	map.	9	MOBASHIR AHMAD: Yes.
10	MR. CLAWSON: Did I say 19? 1-9. Okay.	10	MR. QUIGLEY: Okay.
11	I'm going	11	MR. CLAWSON: Over a period of time, if you
12	MR. HAROUNY: Okay. Okay.	12	go back into the well records, you will find the
13	MR. CLAWSON: Do you see 1-9?	13	well's numbers are transposed frequently, yet it's
14	MOBASHIR AHMAD: Yes.	14	the same well.
15	MR. CLAWSON: Is that incorrectly labeled?	15	MR. QUIGLEY: They are transposed on the
16	MOBASHIR AHMAD: Yes, it should be 1-19.	16	documents we're reading right here?
		h ¬	MR. CLAWSON: Right.
	MR. CLAWSON: Okay. And the other wells	17	
18	well, the other well, well symbols that are	18	MR. QUIGLEY: Okay.
18 19	well, the other well, well symbols that are labeled on this map, are those numbers consistent	18 19	MR. QUIGLEY: Okay. MR. CLAWSON: And they may have had that
18 19 20	well, the other well, well symbols that are	18 19 20	MR. QUIGLEY: Okay.
18 19 20 21	well, the other well, well symbols that are labeled on this map, are those numbers consistent	18 19 20 21	MR. QUIGLEY: Okay. MR. CLAWSON: And they may have had that
18 19 20 21	well, the other well, well symbols that are labeled on this map, are those numbers consistent with what you testified as to Exhibit No. 10, terms	18 19 20 21 22	MR. QUIGLEY: Okay. MR. CLAWSON: And they may have had that number back then. On Exhibits 10 and 11, they may
18 19 20 21 22	well, the other well, well symbols that are labeled on this map, are those numbers consistent with what you testified as to Exhibit No. 10, terms of the wells.	18 19 20 21	MR. QUIGLEY: Okay. MR. CLAWSON: And they may have had that number back then. On Exhibits 10 and 11, they may have had those numbers back then. And since that
17 18 19 20 21 22 23	well, the other well, well symbols that are labeled on this map, are those numbers consistent with what you testified as to Exhibit No. 10, terms of the wells. MOBASHIR AHMAD: 19 2-19 should be 19-2.	18 19 20 21 22 23 24	MR. QUIGLEY: Okay. MR. CLAWSON: And they may have had that number back then. On Exhibits 10 and 11, they may have had those numbers back then. And since that time, those numbers may have been transposed in the
18 19 20 21 22	well, the other well, well symbols that are labeled on this map, are those numbers consistent with what you testified as to Exhibit No. 10, terms of the wells. MOBASHIR AHMAD: 19 2-19 should be 19-2. And the Amigos Three Amigos well is not plotted on	18 19 20 21 22 23	MR. QUIGLEY: Okay. MR. CLAWSON: And they may have had that number back then. On Exhibits 10 and 11, they may have had those numbers back then. And since that time, those numbers may have been transposed in the records. A well these are not the unique

1	MR. HAROUNY: So Mr. Mobashir has not	1	MR. JENSEN: No objection.
2	corrected in his map any names, correct?	2	MR. JOHNSON: Okay. Then let's continue
3	MR. CLAWSON: Well, 10 and 11?	3	this until the October 27th hearing of the board in
4	MR. HAROUNY: Yeah.	4	Salt Lake City.
5	MR. CLAWSON: Actually, those were generated	5	MR. CLAWSON: Okay. Thank you very much.
6	previously by the prior owners.	6	MR. JOHNSON: Thank you.
7	MR. HAROUNY: But these new ones	7	I believe that's all the matters we have to
8	MR. CLAWSON: These new ones, that's what	8	hear this morning, so we are adjourned.
9	we're trying to take care of.	9	Thank you.
0		10	
	MOBASHIR AHMAD: If I may just clarify	11	(This meeting was adjourned at
1	without causing confusion. Exhibit 19 has not been		11:13 a.m.) ****
2	entered. It lists all the wells in this particular	12	* * * * *
3	field with API numbers with the formation that's	13	
4	with all the particulars.	14	
5	CHAIRMAN JOHNSON: We don't have	15	
6	Exhibit 19.	16	
7	MR. CLAWSON: Exhibit well, he's called	17	
8	it Exhibit 19. I haven't entered I haven't filed	18	
9	Exhibit 19. It's a summary of all the wells. Maybe	19	
0	it would be a really good idea to put that in the	20	
1	record, so let's do that.	21	
2	MR. JOHNSON: We're in need of a very good	22	
3		23	
	idea, so go ahead, Mr. Clawson.		
4	Are these is that the handout we got this	24	
5	morning?	25	
	Page 62	2	Page 6
1	MR. CLAWSON: No. It can be a part of it	1	REPORTER'S CERTIFICATE
2	though. We haven't got to those exhibits yet.	2	NEI ONTERO CENTI IONE
3	If I could make this part of that package.	-	STATE OF UTAH)
<i>3</i>	· · · · · · · · · · · · · · · · · · ·	3)
	So while we're waiting to distribute that summary		COUNTY OF ÚTAH)
5	sheet, can we continue?	4	,
6	MR. JENSEN: Can we go off the record for a	5	I, Emily A. Gibb, a Certified Shorthand
7	moment?	6	Reporter and Registered Professional Reporter, hereby
3	MR. JOHNSON: Let's go off the record.	7	certify:
9	(Short recess taken.)	8	THAT the foregoing proceedings were taken
0	MR. JOHNSON: Okay. Let's go back on the	9	before me at the time and place set forth in the
1	record.	10	caption hereof; that the witness was placed under
2	Mr. Clawson?	11	oath to tell the truth, the whole truth, and nothing
3	MR. CLAWSON: It was before going off the	12	but the truth; that the proceedings were taken down
4	record, it was suggested or while we were off the	13	by me in shorthand and thereafter my notes were
5	record, it was suggested that perhaps we should	14	transcribed through computer-aided transcription; and
6		15	the foregoing transcript constitutes a full, true,
	continue this matter until the Board's October	16	and accurate record of such testimony adduced and
7	hearing for purposes of clarifying some of these	17	oral proceedings had, and of the whole thereof.
8	exhibits. And MAR/REG appreciates the Board's	18	I have subscribed my name on this 3rd day of
9	concerns in those regards, and and is agreeable to	19	October, 2010.
С	continuing this hearing and would move the Board to	20	
1	continue this hearing until the Board's October	21	Full A Cit L DDD CCD
2	hearing.		Emily A. Gibb, RPR, CSR
3	MR. JOHNSON: Okay.	22	
4	Is there any objection to that from the	23	
5	Board?	24 25	
			Daga (
	Page 63	<u>' </u>	Page 6

A403307 **SEPTEMBER 22, 2010**

Α

abandoned 12:22 41:4 48:7,24 49:3 **able** 6:5 aboveground 38:19 accurate 51:11 65:16 acres 5:18 14:6 action 1:6 3:9 5:23 7:9 18:12,17 19:7 27:16 37:24 38:4,11,16,24 54:1 55:6 activities 19:15 additional 11:17 12:24 address 9:3 30:5 addresses 18:15 adduced 65:16 adjourned 64:8,10 adjudication 7:18 adjusted 28:24 administers 18:5 Administrative 2:10 administratively 6:8 admission 19:23 admitted 19:20 21:5 aerial 53:18 affair 27:23 affiliated 30:13 affiliation 9:7 30:9 Africa 36:7 agency 1:5 3:9 5:23 7:8 18:12,17 19:6 27:16 37:24 38:4,11,16,24 55:5.6 agent 55:6 ago 36:5 agree 50:13,14,17 61:5 agreeable 63:19 agreement 17:18,20,22 23:15,21,22 25:3,6,13 ahead 3:25 29:8 30:2 55:23 56:17 62:23 Ahmad 8:5,9,21,21 9:2,5 9:5,9,13,18,20,23 10:1 10:6,9,18,21 11:7 13:10 13:13 14:12.16.22.25 15:14,17,24 16:3,7,10 16:13,17,20,24 17:5,9 17:11,14,19,23 18:1,7 18:13.18.20.25 19:3.8 19:16,18 21:11,17 22:1 22:9,12,15,21 23:4,5,13 23:14,17,20,24 24:2,5,8 24:12 25:8,24 26:1,16 27:2 28:1,4,13,20 29:2 29:12,14,17,22 30:1,7,7 30:11,17,21,25 31:8,13 31:23 33:12,23 34:19 35:5,14,22 36:3 37:25 38:5,7,12,15 39:8,19,21 40:6.12.15 41:18.21.24 42:2,5,8,14,17,23 43:2 43:5,8,11,19 44:3,15,18 44:22,25 45:3,7,10,21 46:1,4,7,11,17,20 47:3 47:9,14,17 48:11,14,20 48:23 49:1,8,15,19 50:4 50:7,12,23 51:17,19,22 52:3,19,23,25 53:5,8,11

53:14,21,24 54:2,5 55:2 56:6,8,13,19,24 57:3,7 57:11,16,20,25 58:4,7 58:13,16,21,24 59:4,14 59:16,22 60:3,7,9 61:9 62:10 Ahmad's 33:17 air 52:19 algal 12:20 13:9 36:21 50:11 51:24 52:7,13,17 52:19 America 36:6.7 Amigos 4:24 41:9,9,11 59:23,23 60:2 analog 25:21 analysis 53:17 ancestor 36:8 and/or 32:9 Ann 2.11 answer 28:1 34:15 answering 55:8 **API** 62:13 **APIN** 61:24.25 **APPEARANCES** 2:1 Applied 1:14 appreciate 27:6 33:8 44:11 appreciates 63:18 appropriate 7:5 approval 4:2 5:15 approve 6:8 approved 4:14,23 approves 6:2 7:12 area 10:11,24 11:2,16,18 12:20,22 13:16,23 14:2 50:11 areas 15:2 34:23 arrises 39:13 **aside** 6:17 asked 33:2 asking 4:2 7:17 27:17,24 aspects 8:11 assessed 33:25 assigning 28:23 assignment 26:11 assignments 9:15 26:18 26:19 27:19 **ASSISTANT** 2:12 Associate 2:9 associated 17:3,5 Associates 33:24 assuming 7:12 **ATKINSON-BAKER** 1:21 attention 10:2,13 attorney 2:13,13 55:8 ATTORNEYS 2:12 authority 6:19

В

bachelor's 31:8,13 back 4:13 11:14,24,25 12:8.17 18:14 19:10

a.m 1:18,18 3:3 64:11

average 39:9,13

averages 37:3

averaging 13:2

A403307 1:24

41:19 44:13 46:14 48:18 51:24 61:12,20 61:21 63:10 balance 37:11 barrels 11:12 12:12 13:3 base 26:5.14 27:4 56:11 based 13:3 32:8,23 53:16 basic 36:21 37:16 basically 6:14 12:12,21 13:18,24 30:25 31:17 31:18 34:19,22 36:5,11 36:22.25 37:18 38:19 38:20,21 39:9 40:1,15 46:21 49:8 50:24 54:11 57.21 basin 1:14 36:4,9,12,13 basis 50:3,4,5 **Baza** 2:9 began 3:3 beginning 5:21 44:14 behalf 3:18 believe 22:2 52:5 64:7 **bell** 15:8 beneath 27:13,20,25 29:11 57:22 big 60:25 bit 4:20 31:12 34:17 41:20 51:24 Blanding 10:11 **blank** 10:11 blanket 53:3 **BLM** 18:3.7 **board** 1:1 2:4,11,13 4:13 4:14,19,20,23 5:2,3,7,9 6:2,10,18 7:12 20:1 23:11 27:24 30:6 33:11 35:11 38:15 40:14 51:25 52:5,17 63:20,25 64:3 board's 4:2 5:8,12,15 63:16,18,21 **bore** 14:5 **bores** 14:8 born 36:9 bottom 26:1 37:13,17 Bottoms 13:22 boundary 36:14 box 58:19 Brandon 13:22 break 55:14,18 **brief** 11:5 briefly 31:7 46:9 56:2 bring 39:23 46:14 Bureau 19:4 bushing 38:18,18,24 business 9:22.25 19:12 19:15 44:24 С

C 2:6 calculation 39:14,15 calculations 8.7 call 9:1 10:13 30:4 called 8:22 12:16 41:2,2 42:20 47:24 62:17 calls 41.1 Canyon 4:4 10:8,10 11:7 13:9 31:21 32:25 33:5

36:2 41:3 42:14,21 43:4 43:6 44:5 46:6 47:1,22 48:21 49:2 53:12 cap 52:12 capacity 30:15,24 caption 65:10 carbonate 40:16 56:9,14 57:22 care 62:9 Carter 2:11 casing 11:22,22 12:9 cause 1:13 3:1,8 4:13,19 4:23 5:3 18:12 causing 62:11 cement 12:1.7 cemented 11:23 center 40:21 central 47:18,21,23 certain 25:22 certificate 18:16 65:1 Certified 65:5 certify 65:7 chairman 2:2 3:6,17,20 3:23,24 7:4,10 8:2,16 19:21,25 20:16,19,22 21:2,9,18 23:10 29:1,8 29:25 33:15,19 35:11 41:19,22 42:1,3,6,11,15 42:24 43:3,6,10 44:9,11 47:6 49:18 50:8,12,15 55:17,20,24 56:1 59:5,7 62:15 Chamber 42:20,25 43:21 Chambers 41:1,2 42:12 47:20 48:9 49:1

change 50:20 60:6 **Chavez** 17:15 Cisco 34:11 City 64:4 clairvoyant 32:20 clarification 15:9 23:2 clarified 49:5 clarify 29:9 38:12 39:2,24 51:10 56:3 62:10 clarifying 44:10 50:16 63:17 Clawson 3:16,17,18,25 4:1 7:5,7,11,20,23 8:3

9:1,7,11,16,19,21,24

10:2.7.13.16.19 11:4

13:8,11 14:9,13,17,20 14:23 15:13,15,18 16:1 16:4,8,11,15,19,21 17:3 17:7,10,12,17,21,24 18:2,8,11,14,19,22 19:1 19:6.9.17 20:5.9.14.21 21:1,6,7,12,14 22:2,6 22:14 23:1 24:14,16,22 25:2,5,15 26:7,10 27:6 27:15 29:5,6,9,13,15,19 29:23 30:1,3,9,14,20,22 31:6,20 32:2,7,15,18,21 33:8,11 35:1,3,6,17,25 37:22 38:1,6,9,14 39:4 39:18 40:4.7.13 42:22 43:17 44:9,13,16,19,23

45:1.5.8.15.24 46:2.5.8

46:13,18 47:2,8,13,16

48:8,13,18,22 49:5,14

50:8.10.14.16.19 51:10 51:18,20,23 52:16,22 52:24 53:3,7,9,12,15,22 53:25 54:3,6,22 55:13 55:23,24 56:7,11,16,20 56:25 57:5,9,12,17,23 58:2,5,8,11,14,19,22,25 59:5,6,10,13,15,17 60:1 60:4,8,10,12,17,22 61:2 61:5.11.17.19 62:3.5.8 62:17,23 63:1,12,13 clay 52:1 clear 5:21 6:24 7:9 21:22 clients 34:1 closely 10:25 closest 48:15 college 1:15 31:18 collision 36:8 collisions 36:6 Colorado 31:9.14

columns 31:2 come 41:23 52:4 54:23 comes 32:25 41:24 **commingle** 14:13,15 companies 17:6 29:17 45:6 company 1:6 3:9,19 7:2 9:10 11:9 12:17 17:7 30:13 34:2,5,23 41:25 45:4 53:1 compare 46:13 compress 11:14 computer-aided 65:14 concept 52:2 concern 34:21 58:1

43:23 concerns 31:5 63:19 conclusion 13:6 conduct 9:24 conforms 45:19 confusion 51:7 55:3 62:11

connect 41:12

concerned 34:10 36:12

36:20 38:23 40:24

connection 19:13 **consent** 24:7,9 considered 37:20 consistent 59:19 constitutes 65:15 consulting 8:10 30:15 contact 54:16 contain 5:24 contained 19:12 continental 36:6

continue 14:9 63:5,16,21 64:2 continuing 63:20 **continuity** 34:24 44:5 49:11,15,24 50:15,22

52:6 55:9 Coordinator 2:10 copy 18:21 corner 3:14 16:22 46:3

47:4,15 48:3,5 55:1 corporation 9:17 11:9 correct 21:25 22:1,6,9,12 23:24 24:5 25:1,5,16

A403307 SEPTEMBER 22, 2010

27:14 30:21 38:21 39:21 40:6 43:5 45:7,13 48:20 49:10,24 51:19 51:22 56:19 59:4 62:2 corrected 49:6 62:2 correlate 28:7,10 50:25 correlated 46:22,24 correlation 51:20 corroborating 17:10 County 1:12 3:15 4:5 11:5 65:3 couple 23:12 26:20 **course** 19:14 court 1:21 8:16,18 15:9 31.11 44.1 cover 46:20 covers 25:6 create 5:25 6:2,10,20 creating 5:12 Creek 1:9 3:13 4:6,15 5:4 5:20 11:11 12:11 14:4 22:19 23:3 26:2,6,14 27:10,16,18 30:8 31:22 36:1,4,18,22,24 37:2,17 38:23 39:6,16 52:9 53:20 56:5 58:17,23 critical 36:19 CSR 1:19 65:21 Cup 12:16 34:11 47:25 49:17 50:1,6 current 5:14 25:14 54:18 currently 13:14 34:12

D

Dana 2.9 **DATE** 1:17 day 11:12 12:12 65:18 **DD** 43:12 dealing 5:22 27:18 60:20 dealings 27:21 Dean 2:9 decides 6:19 define 37:15 defined 27:16 definitely 39:22 delineate 11:18 **Delta** 34:12 **Department** 1:2 12:18 13:4 deposition 52:21 depth 22:23 25:23 26:9 26:17,19 28:15,21,24 37:6 45:22 51:4 56:9 depths 38:8 39:1 40:17 45:11 46:23 49:9,20,23 describe 35:25 40:13 described 38:3 description 15:23 20:3 58:15 Desert 1:9 3:12 4:6,15 5:4 5:20 11:11 12:10 14:4

22:19 23:3 26:2,6,14

27:10,15,18 31:21 36:1

36:3,18,21,24 37:1,17

38:23 39:6,16 52:9

53:20 56:5 58:16,23

designated 24:17 29:19

determine 19:1

determined 49:21 develop 24:18,20 development 11:6 difference 22:16 38:25 different 14:14 40:5 differentiated 39:25 difficult 28:10 directly 26:22 Director 2:9,9 discontinuous 53:6 discovered 11:8 12:16 discrimination 37:9 discuss 33:22 34:16 39:7 discussed 10:15 14:19 16:6 18:10 35:21 40:9 58:10 dispute 25:7 distinct 40:5 distribute 63:4 division 2:8,13 3:22 6:8 7:21 19:22 21:20 divisions 48:10 Division's 6:12 **Docket** 1:13 3:1,7 documentation 24:11,23 documents 17:15 19:11 61:16 **DOGM** 44:7 **DOGN** 41:2 doing 12:12 dolomite 37:1,2,11,12,13 **Donald** 17:15 **Donaldson** 2:13 3:21,23 19:21,22 21:9,10,13,15 23:8,10 33:15,16,20,21 34:16 35:9 door 12:15 Doucet 21:18,19,19 22:2 22:7,10,13,16,25 23:6 Douglas 2:2 drain 14:3,5 drainage 13:20 14:7 draw 10:2 41:10 draws 24:24 drill 6:5 13:7,17 14:3 26:2 drilled 4:8 11:10,18 13:24 22:23.23 drilling 1:7 3:10 4:3,3,16 4:20 5:13 6:3 12:23 26:20 45:12

E 2:2 early 46:11 49:22 earn 27:22 earned 22:24 26:4 easily 40:20 east 1:11,16 3:13,15 4:12 4:16 15:19,20,25 20:6 20:11,13,19,20 41:16 economics 8:8

Ε

drills 14:10

51:2,9

Dustin 21:19

dulv 8:22

dry 41:7,14 48:6 50:5

Drive 9:6

education 31:7 32:9 either 7:15,23 50:18 **Emily** 1:19 65:5,21 employee 30:11,17 ends 26:13 Energy 12:18 13:5 16:25 17:2,7 23:18 25:10 34:4 engineer 8:6 9:9 21:20 34:7 engineering 9:14 30:12 30:18 31:9,14,16 34:6,7 entered 62:12.18 entire 5:18 22:7 entirely 37:14 entity 18:20 enviromental 34:8 equivalency 27:4 28:17 equivalent 25:20,21 28:12,15 58:20 escape 40:2 especially 45:21 49:25 52:7,13 essentially 4:15 6:17 36:23 48:6 52:3 establish 44:5 51:24 52:4 54.8 25 established 55:7 establishes 49:11 Establishing 1:7 3:10 evidence 5:16 6:23,25 45:16,18 evident 50:5 **exact** 39:3 exactly 20:14 37:3,8 57:11 **examine** 35:1,3 examined 10:4,16 14:20 16:11 17:24 35:19 37:23 45:15,18 56:22 58:12 60:1 example 13:22 15:3 26:22 34:23 exception 4:24 excuse 39:1,21 48:7 **Excused** 2:4,6,9 exhibit 10:3,4,14,15,16 10:19,21 14:18,19,20 15:1 16:5,6,11,16 17:22 17:25 18:9,10 20:4,7 21:22,23 22:16 35:18 35:19,21,22 40:8,9,10 40:10,14,15 43:16 44:16 48:8 49:6 50:9 53:16 56:2,4,21,22 57:4 57:6,13,15,18,18 58:9 58:10.12.15.17 59:20 62:11,16,17,18,19 exhibits 19:10,19,23 21:4 39:16 61:4,20 63:2,18 exist 49:17,25 59:2

existed 31:3

exists 51:8

existence 54:25

expected 58:3

expedite 49:12

33.18 22

experience 31:7 32:9

expert 21:11 31:25 32:7,8

32:14,23 33:4,12 35:15

explain 13:11 explained 51:15 extensive 4:20 52:14 extensively 31:3 extent 45:16 50:11 53:18 58.2 **Exxon** 16:25 fact 21:12 55:11 failed 12.1 familiar 10:5,17 14:21 16:12,13 17:25 25:9 31:20 35:20 40:11 52:1 56:23 58:11 far 34:10 36:20 38:23 40:17 fault 48:23 56:17 feature 13:9 52:20 53:13 53:15 54:13 features 36:22 52:14 53:6 53:10 Fed 44:21 federal 11:10 18:3.4 41:1 41:3,6,10 42:12,21,25 47:11,12,18,22,24,25 48:21 49:2,17 50:1 feel 14:2 feet 22:18 26:20,23 28:21 37:6,7,7 38:25 41:11,12 48:16.16 51:5 field 4:4 10:8 11:5,7,13 11:18 12:3,15,15,16 13:9,18,25 30:18 31:21 32:23 33:1,5 34:11,12 34:13 36:2,14 46:6 53:12 62:13 fields 10:24 11:1 12:20 12:21,25 13:1,2,5 31:1 34:21 36:13 **FILE** 1:24 filed 5:24 62:18 files 19:12 44:24 final 35:24 find 46:18 60:14 61:12 finding 7:13 fine 7:11,24 26:8 28:23 finish 52:15 first 8:22 9:1 11:9 21:10 32:19 37:5 41:22 46:25 58:22 59:8 five 39:13 46:22 55:21 five-minute 55:14,17 follow 49:13 follows 8:24 foregoing 65:8,15 form 7:7 formal 7:6 formally 7:17 formation 4:15 5:5,17 11:11 12:11 23:3 25:22 27:5,10 36:17 39:11 53:20 54:12 56:5 58:6 62:13

formations 1:10 3:13 4:4

4:5.6 5:20 36:1.17.21

formed 36:5

37:14,15,18 40:2 50:25

forth 65:9 forward 46:15 found 40:20 45:11 foundation 32:24 four 39:13 fractures 13:19 Fred 2:13 frequently 61:13 front 52:5 full 65:15 full-time 30:11 31:19 future 6:9

G gas 1:1,9 2:8 3:12 10:24 11:13,15 31:18 gassier 49:4 general 2:12 5:8 11:2 13:12 33:6 51:15 54:3,8 generally 32:24 generate 60:8 generated 45:5,9,10 62:5 geographic 31:2 geologic 8:11 28:8 30:15 geological 10:22 12:19 13:4 25:22 33:13 35:3,6 35:24 geologically 28:14 geologist 8:10 30:16 32.22 geology 33:12,17,22 34:18 geophysical 31:9,14 germane 27:8 getting 13:21 Gibb 1:19 65:5,21 **Gill** 2:4 give 6:7 15:22 37:2 38:7 48:11 53:18 given 12:19 24:9 59:24 go 3:25 29:8 30:2 32:6 37:6 39:11 42:22 44:13 55:23 61:12 62:23 63:6 63:8.10 going 6:23,25 11:1 12:6 13:20 26:20 32:11 33:4 33:5 46:14,18 47:10 48:18 54:19.21.22 59:11 63:13 good 6:7 7:24 9:19 13:21 23:14 26:18 55:15 62:20,22 gotten 43:17 governing 6:11 **Government** 15:17 18:3 **Graham** 25:10 grant 12:19 gravity 14:7 great 13:25 Green 34:13,13 guess 30:19

Н

guys 22:4

half 4:16,17 39:12 40:22 handling 43:23 handout 62:24 Hang 43:8

A403307 SEPTEMBER 22, 2010

42:4,7,13 43:1 44:17

happen 46:15 happened 11:21 happening 20:25 Harouny 2:5 23:12,19,21 23:25 24:3,6,10,13,15 24:20 25:1,3,11,17,25 26:5,9,12,25 27:3,14 28:3.11.19.25 43:9 48:25 50:17,21 51:2 54:7 55:19 59:12 60:10 60:13,21,24 61:3 62:1,4 62:7 head 47:8 58:4 hear 51:14 64:8 hearing 33:14 35:16 55:10 63:17,20,21,22 64:3 help 51:13 54:6 helpful 20:10 hereof 65:10 hiah 27:11 **Hills** 9:6 history 11:5 hit 26:3 hold 52:23,25 hole 12:1,4 41:15 50:5 51:2.9 holes 11:21,22,24 12:9 48:7 homogeneous 37:14 horizontal 1:8 3:11 4:8 5:13.16.25 6:5.9 12:23 13:7,17,24 14:3,11,14 54:20,20,24 hundred 26:20 hydrite 37:19 Hydrocarbons 1:9 3:12

idea 55:16 62:20,23 identification 61:4,24 identified 42:16 immediate 39:13 impermeable 37:19 importance 49:7 important 27:21 39:5 include 7:13 19:2 included 4:17 22:19.21 24:14,23 including 4:21 34:1 incorrectly 40:25 42:16 42:19 59:15 increase 13:6,16 indicated 6:12 indicating 10:12 industry 31:18 32:22 information 2:10 33:17 38:8 60:5 initial 11:12 37:5 intends 14:9 intercept 54:24 interest 6:16 7:3,19,21 17:8 29:21 44:3 interested 11:3 interests 16:9 27:20 internal 42:8 45:3 interpretation 35:7 37:8

45:20 60:6

interpretations 33:13 interrupt 52:16 interval 22:17,20 26:8 27:9,19 28:6,7,14,23 intervals 4:9 8:12 14:15 27:20 28:13 38:3 39:3.5 40:5 53:23 introduce 8:4 involved 18:12 irrelevant 51:17,18,21 Ismay 1:10 3:13 4:6 5:19 12:11 14:4 23:2 27:15 31:21 36:1,3,17,20,24 36:25 38:22 39:6,9 40:16,18 45:14 49:4,9 49:21 51:1 52:8 54:12 54:12 56:9,12,14,15,18 57:21 58:5,18 ISO 57:20,23,25 issue 6:14 32:12 54:15 issues 8:7 49:6

J

J 2:4

Jake 2:5

Jake's 38:16

James 2:5 Jean 2:7 Jensen 2:5 7:4,22 8:1 20:2,12,15,24 31:24 32:3,10,17,20 33:7,10 41:16 50:2,6 51:14 55:15 63:6 64:1 Jim 2:10 **JOA** 22:11 job 12:1 iobs 31:4 John 2:9 Johnson 2:2,13 3:6,20,24 8:2,16 19:21,25 20:16 20:19,22 21:2,9,18 23:10 29:1,8,25 33:15 33:19 35:11 41:19,22 42:1,3,6,11,15,24 43:3 43:6,10 44:11 47:6 49:18 50:8,12,15 55:17 55:20,23 59:5,7 62:15 62:22 63:8,10,23 64:2,6 joint 17:19,21 Jr 2:4 Juan 1:11 3:15 4:5 Julie 2:11 jumped 56:16 junction 36:19

Kaplinger 33:24 kelly 2:6 38:18,18

kelly 2.6 38:18,18,24 kind 54:7 know 7:6 24:22 27:10,11 28:20 37:4,9 38:8 42:6 45:8 46:9 51:14 60:19 61:3

known 47:22

labeled 10:10 16:8 42:19 49:12 57:13 59:15,19

labeling 49:6 labels 61:6 Lagoon 1:16 laid 52:10 Lake 3:15 64:4 land 8:6 9:14,15 15:12 19:4 47:10 lands 4:10,12,18,21 5:6 7:2 15:23 17:8 18:4 29:11,21 44:19 47:5 57:22 larger 42:4,7 57:8 lateral 4:7 34:24 laterals 14:5 layer 37:19 lease 15:3,7,12,13,16 21:25 22:8,10 24:1 leasehold 16:22 led 55:3 left 8:4 20:17 48:1 52:20 legal 15:22 20:3 let's 39:12,17 40:16,23 41:10,19,19 43:12,20 44:13 46:23 55:17,20 62:21 63:8,10 64:2 level 38:22 39:1,2 40:17 40:18 49:20 51:6 limestone 36:25 37:1,3 37:11 limitation 25:23 limited 53:7 line 21:1.2.3 24:24 27:7 36:14 41:11,12,13,14 48:16,17 54:19 linear 36:22 lines 25:6 list 18:15 19:2,7 lists 62:12 little 31:12 34:16 41:20 46:9 LLC 17:1 29:12,13 locate 43:14 located 4:4.25 47:13 location 4:24 5:8 10:23 26:13 40:24 48:7 59:25 log 25:21 28:8 logs 31:2 long 23:14 look 10:25 31:1,2 34:20 34.20 20 22 looked 13:15 looking 40:19 44:16 52:7 57:9 lost 54:7 60:13 lot 12:21 13:24 44:7 61:5 lots 35:1 52:9 lower 12:4

M MacKay 31:16 mailed 19:7 mailing 18:16 main 34:21 managed 33:25 Management 19:4 manager 34:8 managing 24:8 29:18 map 10:9,23 40:16 41:23

45:19 46:5,10,19,22 48:9 49:7,13,19 50:21 51:10 53:17 57:1,8 58:23 59:9,19 60:8 62:2 mapped 56:4,7,8 maps 35:4 Marathon 12:17 41:25 45:4 49:22 marked 48:24,24 49:3 marker 28:9 markers 28:11 MAR/REG 1:6 3:9,16,18 7:2 8:10 9:8,10,13,16 14:9 17:3 19:13 23:15 23:25 24:15,25 25:12 25:13 27:21 29:16,19 30:10,12 45:1,17 63:18 MAR/REG's 8:5 17:12 19:12,14 25:4 44:24 master's 31:15 matter 1:5 3:6,8 5:24 23:1 24:11 43:22 55:10 63:16 matters 49:12 52:11 64:7 MC 11.8 McCord 47:11,24 49:16 49:17,25 50:1 McCulloch 11:9 41:5,25 44:21 45:4 47:1,17 49.22 mean 5:2 13:8 15:19 18:23 24:12 25:24 28:8 28:9,14 32:18 33:3,18 38:10 39:19 51:12 54:24 55:12 means 4:16 5:5 51:15 meeting 64:10 members 2:4 21:16 51:25 member's 38:15 memo 45:3 mention 37:12 mentioned 55:11 Meridian 3:15 Mesa 34:11 metallurgical 31:15 method 6:8 Michael 2:13 middle 60:25 mid-continental 36:7 million 13:3 36:5 minerals 15:15 18:5 29:11 Mines 31:10,14,16 minimal 13:25 mining 1:1 2:8,9 30:12 34:4,6,7 Minoco 34:1 Minson 34:1 minus 38:21,21 51:5 minute 59:7 **minutes** 55:21 missed 34:24

misunderstanding 20:8

30:7,7,11,17,21,25 31:8

35:5,22 36:3 37:25 38:5

31:13,23 33:23 34:19

Mobashir 8:9,21 23:5

mixed 37:15

38:7,12,15 39:8,21 40:6 40:12,15 41:18,21,24 42:2,5,8,14,17,23 43:2 43:5,8,11,19 44:3,15,18 44:22,25 45:3,7,10,21 46:1,4,7,11,17,20 47:3 47:9,14,17 48:11,14,20 48:23 49:1,8,15,19 50:4 50:7,23 51:17,19,22 52:3,19,23,25 53:5,8,11 53:14,21,24 54:2,5 55:2 56:6.8.13.19.24 57:3.7 57:11,16,20,25 58:4,7 58:13,16,21,24 59:4,14 59:16,22 60:3,7,9 61:9 62:1,10 Mobil 16:25 moment 19:18 63:7 moot 6:14 morning 3:7 62:25 64:8 mound 12:20 13:9 36:21 50:11 51:24 52:17,19 mounds 52:7.13 mountain 26:14,24 move 19:19 32:13 58:8 63:20 Multipurpose 1:15

N

MURRAY 7:15

name 9:3 25:4 30:5 42:6 47:25 48:21 49:2 65:18 names 18:15 50:18,19 62:2 Nathan 7:3,3 17:1,4 23:20 24:4,9 29:10,12,16,18 29:20 natural 1:2 11:13 nature 33:1 52:1 near 36:22 necessarily 51:12 53:5 need 5:21 31:25 32:3 37:11 51:23 55:19 62:22 needs 20:6 negative 49:20 Nevada 9:6,16,23 30:8 31:17 34:9 Nevertheless 5:11 new 26:13 62:7,8 NE1/4 1:10 Nods 47:8 58:4 non 23:16 noncontinuous 54:14 north 3:13 36:6,15 41:11 41:12 northeast 4:11 5:6,22 6:3 6:17 7:1 15:6,10,18 16:22 17:13.17 18:23 21:24 22:4,11 26:23

northeastern 36:15,16

42:12,25 44:20 47:7,10

47:15 52:6 55:1,7 59:2

A403307 **SEPTEMBER 22, 2010**

number 15:13 27:4 43:7 59:1 61:20,24,25,25 numbers 44:6 46:14,16 59:1,19 61:13,21,22 62:13

0 oath 65:11 object 19:22 objection 35:10 63:24 64.1 objections 20:1,23 35:12 obviously 48:17 October 63:16,21 64:3 65:19 office 19:3 Officer 2:10 Oh 29:15 39:21 41:24 43:11 48:7 56:16 oil 1:1,6,8 2:8 3:9,11,12 3:18 7:3,3 9:10 10:24 11:8,9 12:17,24 13:16 13:25 17:1,4 23:20 24:4 24:9 29:10,12,16,18 31:1,18 34:1,21 40:2,3 41:25 45:4,4 51:8,12 53:1 54:16 Oil's 29:20 okay 3:6 4:1 8:1 9:1 10:2 13:13 14:17 16:4 18:8 18:11 19:9,17,25 20:15 20:22 21:4,9,13,15,18 22:13.25 24:10 25:15 26:16 28:3 29:4,23,25 31:6 32:17,21 33:7 35:9 35:14,17 38:6,14,22 39:4 40:7 41:21,22 42:1 42:11,19,24 43:19 44:13,15,23 45:24 46:5 47:16 48:20,22,23 51:2 54:12 55:20,23 56:20 58:8,19,25 59:10,12,12 59:17 60:21 61:10,18 63:10,23 64:2,5 old 25:5 34:21 36:8 older 44.7 oldest 52:12 once 56:3 ones 52:12 62:7,8 online 11:25 12:8 00000 1:4 opening 22:3 operate 12:15 operated 25:9,10 operating 17:20,21 23:15 23:21,22 25:3,6,13 operator 17:1 23:16,23 24:16,17,25 25:12,14 29:20 operators 11:23 18:22 23:16 opinions 21:14 oral 65:17 order 1:6 3:9 4:17,21 5:7 5:10 13:6

orders 5:4

original 23:22 24:24

originates 40:3

ought 7:16 32:13 outside 43:22 44:4 54:18 55:5,10 owned 16:24 17:1 owner 23:25 24:3,15,17 57.1 owners 16:22 18:22,23 62:6 ownership 6:16 8:7 14:25 15:1 16:8,17,19 19:5 22:3,17 27:12,19 owns 7:3 15:15 16:1.21 17:7 18:3 29:11

Pacific 30:12,18 34:4 pack 57:20,24,25 package 63:3 packer 12:3 page 20:17 Pakistan 34:8 paper 60:14 **Paradox** 36:4,9 parameters 39:5 part 7:14 27:23 36:4,15 36:16,16,18 42:25 44:24 47:21 54:9,10 57:7 63:1.3 particular 13:18 26:21 36:12,14 37:4 43:24 46:22 58:1 62:12 particulars 62:14 parties 19:2 24:24 57:5 partner 24:8 29:18 partners 13:23 27:22 parts 15:3 36:11 party 6:4 24:18 passing 55:11 Payne 2:6 percent 16:25 17:2,2,8 24:3 37:10,12,13 39:10 39:12,17,18,20 period 61:11 permeability 37:17 39:10 39:16,22 permit 26:8 pertaining 60:15 petroleum 8:5.10 9:9.14 21:19 30:15,20 32:22 33:17,22 34:5,10,13,18 phonetic 47:12 picture 53:18 pipeline 11:13,15 place 9:21 39:11 65:9 placed 65:10 planning 36:13 please 3:25 8:17 9:3 10:7 11:4 13:11 14:23 30:5 30:22 31:6 35:25 40:13 49:7 52:17 57:17 58:14 60:11 plotted 48:9 59:23 plugged 11:19 41:4,7 49.3 point 10:7 22:24 23:17

pooling 17:18 porosity 37:16 39:7,8,9 39:19 45:13,23 49:9,10 49:21,23 51:1,3,7,11 54:9,11,14,21 56:5 portion 22:10 42:3,13 47:18 portrayed 45:19 pose 21:16 position 9:12 33:24 possession 45:17,18 possible 53:19 possibly 52:8 prepare 7:6 prepared 19:13 presented 45:16 pretty 11:25 13:21 23:22 25:8 45:12 previous 5:4 11:23 previously 4:12 5:10 29:10 62:6 principal 9:12,21 30:23 prior 57:1 62:6 probably 32:5 problem 12:2 problems 12:9 20:3 31:1 31:4 proceed 24:7 proceeding 13:12 19:14 27.8 proceedings 3:3 65:8,12 65:17 produce 14:7 24:18 produced 57:1,3,6,8 producing 5:19 12:10 13:14.19 14:10 36:17 37:5,16 41:3 production 1:8 3:11 11:12,24 12:13 14:14 14:15 41:4 productive 51:3 53:19,19 Professional 65:6 projected 51:5 proper 48:21 49:2 59:24 properties 5:17 38:17 57:2 property 24:20 47:22,24 proposed 8:12 40:23 54:18 provide 11:4 32:24 58:14 60:5 providing 21:11 prudent 6:10 Public 2:10 publication 42:9

pull 54:25

pulled 12:6

pulling 12:6

54:8 61:3

pursue 6:15

pursuing 7:21

60:24 62:20

purpose 13:12 50:9 54:3

purposes 5:19 33:12,13

put 6:23,25 11:24 12:3,7

Q

35:15 44:9 63:17

QEP 16:25 17:2,7,12 23:17 **QEP's** 17:14 qualified 9:24 31:25 32:8 32:14 33:4 qualify 32:4,5 quarter 4:11,25 5:6,23 6:1,3,11,17,22 7:1,18 15:4,5,11,11,18 17:13 17:17 18:24 21:24,24 22:4,11 28:16 40:20 44:4,20 47:4,15,19,21 48:4,5 52:6 55:7 59:3 quarters 15:6 Questar 13:22 23:18 19 question 21:22 25:19 26:18 28:2,25 32:16 33:1,9 38:16 47:10 48.19 61.7 questioning 27:7 questions 19:18,24 21:7 21:16,21 23:7,8,11,12 29:1,7,24 33:20 34:14 35:12 44:10 55:8 Quigley 2:6 20:18 61:7 61:10,15,18 quite 4:19 7:6 44:6 50:4 55:4

R

R 2:9 Ranch 15:20 range 1:11 3:14 4:12 15:19,25 20:6,13,19 21:3 60:16 rate 11:12 read 20:4 28:4 49:12 reading 20:11 61:16 real 58:2 really 26:18 27:23 33:3 43:23 49:17 62:20 reason 52.4 recess 55:22 63:9 recognize 33:11 35:14 recommended 12:23 reconvene 55:21 record 7:9,16,17 9:4 16:24 20:5 24:12 25:18 29:9 42:10 44:10,23 62:21 63:6,8,11,14,15 65:16 records 19:5 25:12 42:20 43:15 44:7 46:14,24 48:10,15 53:17 61:12 61.23 recoverable 13:3 recovery 13:7,17 rectangle 60:18 rectangular 58:19 redirect 29:7,24 refer 14:17 16:4 18:8 19:9 35:18 40:7 56:21 reference 35:23 38:10 39:14 referring 51:6 regain 53:2 regarding 7:1

regards 63:19

registered 34:7 65:6 regular 19:14 related 29:17 relationship 29:16 50:24 57:14 relative 51:15,16 remaining 6:1 remedy 31:4 renders 6:14 Reno 9:6,23 30:8 31:17 report 10:22,23 13:4 35:24 REPORTED 1:19 reporter 8:17,18 15:9 31:11 44:1 65:6,6 REPORTERS 1:21 REPORTER'S 65:1 represent 59:2 representing 3:16,21 request 1:5 3:8 5:23,24 6:2,18 7:8,12 17:13 18:11,15,16 19:6 37:23 38:3,11 51:16 53:25 55:6.6 requested 35:15 requesting 38:17 research 33:25 reserve 8:7 reservoir 5:17 8:8 12:8 31.22 **RESOURCES** 1:2 respect 4:21 response 29:3 35:13 responsibilities 9:12 30:23 right 5:14 7:16.20.22 8:9 10:11,11 16:10 20:21 24:18 25:11 27:2 36:14 40:21 42:23 46:4 48:13 49:20 60:17 61:2,16,17 rights 17:1,10 26:4 right-hand 20:20 46:3 **River** 34:13 Road 30:8 rock 52:12 Rockies 36:8 rocks 52:11 Room 1:15 Roosevelt 1:16 RPR 1:19 65:21 Ruland 2:4 rule 5:12 6:4.11 **rules** 5:9 run 31.7

S S 2:13 Salt 3:15 64:4 Samuel 2:6 San 1:11 3:15 4:5 saturated 54:15 saturation 54:17 **save** 38:9 saw 13:15 saying 15:10,20 24:21 26:17 28:20,21 50:13 says 28:23 scale 40:19

Policy 2:10

pool 58:3

39:12 54:17,17,19,20

A403307 **SEPTEMBER 22, 2010**

Schneider 2:10 School 15:8 31:9,14,16 sea 36:21 38:22 39:1,2
40:17,17 49:20 51:6 seal 40:1 second 30:4 37:7,12 48:11
Secretary 2:11 section 1:10 3:14 4:11,18 4:22 5:1,19 6:1,6,9,18
6:22 15:2,3,4,12,19,24 16:18,23 18:23,24 28:8 28:12,16 35:23 40:19 40:20 43:19 44:4,17,20
46:4 47:5,23 48:3 52:6 54:10,10 57:10 58:20 59:3 60:16,18,19 61:1 sections 6:1,11,12,22 7:8
7:18 sediment 53:4 see 20:24,24 23:14 24:21 27:3 31:3 39:17,24
40:23 41:10 43:12,21 43:21 44:20 46:23 59:8 59:13 seeking 4:7 5:14
seismic 11:8 Semborski 2:7 Semi-continuous 53:6
send 42:9 sense 6:4 sent 17:15 18:21 separate 37:20 38:2 40:5
separated 37:19 September 1:17 3:2 set 6:16 65:9 shale 40:3
shallow 36:21 sheet 43:15 53:3 60:14 63:5 shore 36:22 52:20
Short 55:22 63:9 shorthand 65:5,13 shot 5:5
show 5:16 18:19 25:12,13 41:8 48:10 50:10,21 58:2 showing 20:17 49:16,19
50:24 shown 49:25 shows 10:23,25 11:1 14:24,25 15:1 18:20
21:23 40:23,24,25 41:3 41:5 49:8 50:23 51:4 57:18,19,21,25 58:16
sic 55:6 side 20:17,20 26:24 45:13 51:3 similar 56:25 58:17
similarly 14:2 57:4 single 14:4,5 sir 16:7 29:14 sister 7:2
sites 36:10 six 37:7,7 42:18,18 46:21 slight 49:3
slow 31:11 42:22 small 53:9,13,15 Snow 13:8

Snow 13:8

```
someplace 53:1
somewhat 37:15
sorry 5:2 13:9 29:15
  31:11 44:1 52:24 54:7
  56:16
sort 9:15 18:5
sounding 15:8
source 52:11
south 1:11 3:14 4:11 9:5
  15:20,24 20:7,13 36:7
  47:21,23 48:16
southeast 6:21 10:12.24
  11:2 15:5 47:4,6,21
  48:3,19
southwest 6:21 15:6,11
  21:24 47:3 48:4,5
southwestern 36:16,18
space 27:17
spaced 4:13 5:9,10 26:8
  38:3 39:5 53:22
spacing 1:7 3:10 4:7,14
  5:4,7,12,15,18,25 6:13
  6:20 8:13 13:12 17:13
  27:8
Speaking 8:16
specific 26:7,9,17,19
  27:3,9 28:14 32:12
  33:19 34:14
specifically 34:17 56:14
Springer 2:10
Squaw 4:4 10:8,10 11:5,7
  13:9 31:21 32:25 33:5
  36:2 41:2 42:14,21 43:3
  43:6 44:5 46:6 47:1,22
  48:21 49:2 53:12
squeeze 12:1.7
staff 21:15
standing 9:19 52:13
stand-up 4:15
start 52:14
state 1:3 9:3 19:3 30:5
  34:8 65:2
stated 12:21
statement 51:18
States 16:3
status 5:14
step 51:23
Steve 2:10
straight 25:18
stratigraphic 4:9 8:12
  22:17 25:20 27:12,20
  28:5,13,23
straws 52:23.25
Street 1:16
stripper 13:25
structural 50:11.24 56:9
structure 40:16 45:13
  49:16,21 51:5 52:10
  56:10 58:17,18,23
structures 56:14
studied 12:14 13:5
study 12:19,20 42:9
sub 36:13
subject 4:10,18 5:5,7,8
  5:11 7:1 15:23 17:8,18
  17:19 25:6 29:11,21
  43:22 44:17.19 47:5.9
  54:10 55:10 57:9,22
```

```
submit 7:10
submitted 39:15
subscribed 65:18
success 13:21 14:1
                              55:24 56:1 64:5,6,9
successor 23:23
                            Thanks 32:17
                            thereof 65:17
suggested 55:13 63:14
                            thickness 57:21 58:1
  63:15
                            thing 18:6 28:22 38:13
summary 43:15 62:19
support 5:18 6:13 17:12
                              51:6
                            things 9:15 42:18
  17:16
sure 25:8 27:7 38:20
  43:12 60:12
surface 16:2 18:3,23 28:6
  28:18
                              32:12 38:10 39:15
surrounding 15:2
                              51:23 55:3,15
Survey 10:22 12:19 13:4
                            thinking 6:7
  35:24
                            third 3:6 37:7
sworn 8:15,23
symbols 59:18
                            third-party 34:1
S.L.M 1:11
                            Thomas 30:8
                            thought 6:9
T 2:5
                              59:23 60:1
                            time 1:18 11:14 14:7
take 11:15 14:5 55:14,17
                              38:10 54:18,19,20
  62:9
                              61:11,22 65:9
taken 1:14 55:22 63:9
                            Tin 12:16 34:11 47:25
  65:8.12
                              49:17 50:1,6
talked 17:14 39:7
talking 26:10,12 27:9,13
                            title 16:24
                            today 4:2 5:14,23 6:23
  37:22 38:1 45:25
                              8:4,13 30:14
Tariq 8:5,5,21 9:2,5,5,9
  9:13,18,20,23 10:1,6,9
                            Tom 3:18
  10:18,21 11:7 13:10,13
                            top 20:7 26:13 37:10
  14:12,16,22,25 15:14
                              52:12 56:13.17
  15:17,24 16:3,7,10,13
                            touch 56:2
  16:17.20.24 17:5.9.11
                            town 34:13 60:19
  17:14,19,23 18:1,7,13
  18:18,20,25 19:3,8,16
  22:1,9,12,15,21 23:4,17
                              20.17 21.2
  23:20,24 24:2,5,8,12
                            townships 20:11
  25:8.24 26:1.16 27:2
                            trains 11:1
  28:1,4,13,20 29:12,14
                            transcribed 65:14
  29:17,22 39:19
                            transcript 65:15
TD 26:3
                            transcription 65:14
technical 55:4
technically 38:18
                              61:13,15,22
Technology 1:14
                            treated 32:14
tell 8:23 10:20 14:23
                           truck 11:15
  16:16 30:22 49:7 52:17
                            true 65:15
  57:17 65:11
tells 16:17 40:17
                              65:12
temporary 5:12,25 6:10
                            try 12:7 56:3,3
  6:13,20
                            trying 25:17 26:25 32:2
ten 13:1
                              52:4 54:25 62:9
terms 27:22 34:17 51:11
                            Twenty-five 20:18
  55:4 59:20
                            two 4:4,7 11:21 13:13
test 12:4 39:12
tested 11:10
                              36:11 40:4 43:11,20
testified 8:24 18:2 29:10
                              45.6 48.2
  46:9 57:14 59:20 60:17
```

```
thank 3:17,20,24 4:1 8:1
  8:2 20:9,14 23:10 29:4
  29:25 30:3 33:10 35:17
  39:24 42:20 43:23 44:4
think 7:15.15 11:19 12:5
  12:18 20:16 21:23 23:1
  23:6 25:15 26:22 28:1
  40:22 41:6 43:13 46:11
three 4:24 37:5 41:8,9,11
today's 7:12 13:12 33:13
township 1:11 3:14 4:11
  15:19,20,24 20:6,10,12
transposed 44:6,8 46:16
truth 8:23,23,24 65:11,11
  14:5,8,14 27:13 29:20
type 27:23 34:17 57:1
typically 32:7
Uh-huh 25:25 43:2
```

understand 25:11 26:16 understanding 55:5 unique 61:23 unit 4:3 5:13 United 16:3 units 1:7 3:10 4:3,15,16 27:12 University 31:16 unknown 48:2 unleased 15:4 uphold 12:9 uplifted 36:9 upper 1:10 3:13 4:6 5:19 14:4 22:20 23:2 27:15 31:21 36:1.3.17.20.24 36:25 38:22 39:6,9 40:16,18 45:14 46:2 49:4,9,21 51:1 52:8 54:9,9,12 56:9,11,13,14 56:18 57:21 58:5,17 useful 49:14 usually 28:11 Utah 1:3,12,16 3:15 4:5 9:25 10:22,24 12:19 13:4 35:24 65:2,3 U.S 15:17 **U40401** 15:14

vacated 4:20 5:3,10 variation 37:1 varies 39:11 vent 31:2 verify 48:14 vertical 13:19 14:10 vicinity 36:2 vintage 46:10 viscerate 6:4 volumes 31:3 voluntary 17:18

w

Wait 59:7 waiting 63:4 want 7:23 20:4 21:16 55:25 56:2 wanted 21:10 32:18 39:24 water 12:13 54:16 way 7:15,25 13:16 22:22 28.5 Wednesday 3:2 wells 1:8 3:11 4:8 5:25 6:9 11:17,19 12:24 13:7 13:13,24 14:10 28:18 40:24 43:20 44:7 45:12 46:21 48:2 57:12 59:2 59:17,21 60:23 61:24 62:12,19 well's 61:13 west 4:17 48:16 we're 4:2,7 5:14,22 6:23 6:24 12:6 27:9,13,17,17 27:24 43:22.23 50:16 54:25 61:16 62:9,22 63:4

58:20 60:18

60:22

65:16

testify 8:6,11 32:8

testimony 21:11 22:4

43:24 51:21 54:22

25:16 27:11 31:5 32:25

Uintah 1:14

ultimate 13:6.17

Testifying 53:25

we've 60:19

whatnot 27:22

A403307 SEPTEMBER 22, 2010

	I		I	I
wise 28:8	5:15 6:3	5		
wish 6:15 39:6 42:10	1618 42:25 43:21	5 12:12		
wit 60:20	17 18:9,10 19:10,19 21:4	50 16:25		
withdrawal 7:6	18 16:5,6 19:10,20 21:4	500 11:12 28:21		
withdrawing 6:18 7:7	21:23 22:16 43:19 46:4	5240 38:19		
witness 9:2 15:10 21:8,12	47:23 48:3 54:10			
23:9 25:2 30:4 32:8,14	188-04 1:13 3:1,8	5250 38:17		
35:2,8 51:4 56:4 65:10	188-1 4:14	5280 40:22		
		5390 38:19		
witnesses 8:4,14,22	188-1C 4:19	5400 38:17		
work 34:17	188-3 4:23	5470 38:25,25		
worked 12:5 31:17 32:21	188-3A 5:3	5480 38:24		
33:23 34:11	19 1:10 3:14 4:11,18,22	5570 39:1		
working 8:10 17:8 34:4	5:1 6:1,6,9,22 15:2,4,24	5580 38:24		
34:12	16:18,23 40:19 43:16	5605 43:12		
writing 24:7	44:17,20 49:11 54:10			
written 28:5 45:23 47:11	57:10 58:20 59:3,10,22	5612 22:17,18,18,22 23:3		
49:23	60:18,25 61:1 62:11,16	25:24 28:6,7,12		
wrong 15:21 34:23		564 39:2		
•	62:18,19			
WWW.DEPO.COM 1:22	19-1 40:25 44:21 46:23	6		
	47:1 61:8	6 12:12		
Y	19-2 41:5,6,10,13 47:17	640 5:18		
Y 2:5	47:18 59:22			
yeah 11:7 21:2 31:8 32:3	1979 11:8	640-acre 5:12		
34:19 38:25 39:8 41:6	1980 4:13 46:11,14			
	1983 31:10,15	7		
42:14 43:15 47:9 51:4	1986 31:19 34:3	700,000 13:2		
60:12 62:4		715 41:11		
years 11:20 32:22 34:5	1988 5:2	74 37:13		
36:5	1989 5:3			
		75 17:2 24:3		
	2	76 37:10		
zone 26:21 37:6,7,7,10	2 10:14,15 19:10,19 21:4			
	2-19 59:22	8		
37:12,13,16 51:3,8		80s 46:12 49:22		
53:19 54:21 58:1	2.5 13:2	80-acre 4:14		
zones 12:4 27:13 37:5,9	2000 12:18 31:17			
37:20,23 38:2 49:9,23	2005-2005 12:18	800 1:22		
51:1 54:11	2010 1:17 3:2 65:19	820 48:16		
zone's 54:14	2010-024 1:13 3:1,7	89501 30:8		
20110 3 04.14	2140 48:16	89511 9:6		
	22 1:17 3:2			
1	234 38:21	9		
1 10:3 19:10,19 21:4		9 15:19		
1-18 47:24 49:17 50:1,6	25 15:19,20 17:2,8 20:10			
1-19 11:10,21 13:15 22:22	20:19	9:44 1:18 3:3		
26:23 37:4 40:24 43:25	26 1:11 3:14 4:12 15:19			
44:1,5 47:1,25 55:5,9	15:20,25 20:6,12,20			
59:1,8,16 60:23 61:7	2640 40:21			
	27th 64:3			
1-9 59:10,13 60:23	288-3376 1:22			
1.4 39:14	<u> </u>			
10 38:25 40:8,9,10,15	3			
44:16 48:8 53:16 56:2,4				
57:4,6,15 58:17 59:20	3 14:18,19 19:10,19 20:4			
61:20 62:3	21:4,22			
10-19 47:20,22	3rd 65:18			
1019 40:25 41:3	3-19 11:20 12:10 13:14			
11 37:6 55:21 56:21 61:20	26:21 40:25 41:13			
	43:25 44:1,6,21 47:11			
62:3	47:12,12 49:16,25 55:9			
11:13 1:18 64:11				
1100 1:16	59:1 60:23			
12 58:9,10	30 32:22			
12805 30:7	300 26:23 36:5			
13495 9:5	329 51:5			
14 39:10	37 37:12			
150 41:10	38 1:11 3:14 4:11 15:24			
	20:6,13			
16 17:22,25 19:10,19 21:4	1			
39:17,19	384 38:22			
16-18 42:12,20,21 46:1				
48:2,9,21 49:1,2	4			
160 14:6	4 35:18,21,22			
160-acre 1:7 3:10 4:3,7	464 39:1			
	1	1	1	1